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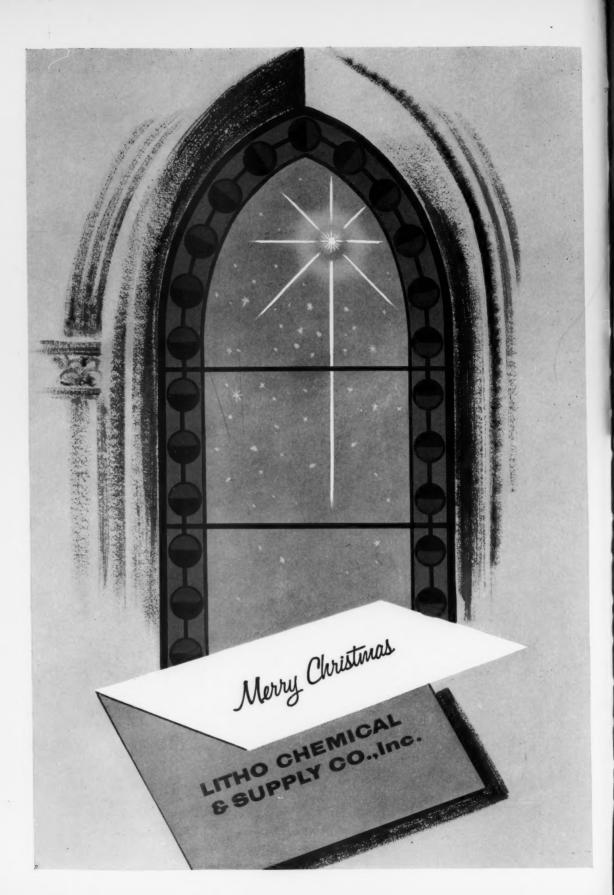
Modern

Merry Christmas

NAPL Convention Report Color Under Control Offset Paper of Future Three-Color Standards Education in Washington Colored Paper for G. A.

DECEMBER, 1959







ABOVE: Baldwin Press Washers make color changeovers less of a chore for the pressman and reduce press downtime to a minimum. BELOW: Here you see the new Macbeth "Mark 50" Printing Lamp that speeds production and practically eliminates makeovers.

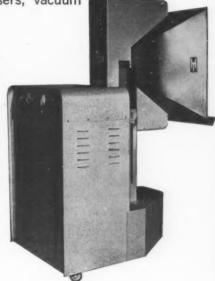
Your pressmen, platemakers, and profits all benefit from Roberts & Porter service before the sale...

When you give pressmen and platemakers the <u>right</u> equipment they can make the most of their skill as craftsmen. The result: increased production, higher quality, lower costs.

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CRONAR ORTHO A is on Du Pont's tried and proven polyester film base. It's available in either .004" or .007" thickness. Use it when you need a film with wide exposure and processing latitude, hard halftone dots and a tough, rugged support with exceptional dimensional stability. Important note: Many shops report that this is the only film ... the only emulsion ... that can be used successfully in the increasingly popular "bump exposure" technique.

ACETATE ORTHO LITHO FILM on .0055" acetate base has the same superior high-contrast emulsion as CRONAR

ORTHO A coupled with special surfaces which minimize Newton's Rings and trapped air in plate-making. Use it for those jobs which require scoring, cracking, extensive scribing or knife etching.

Standardize your litho film requirements with these two films. Both are exposed and processed alike. Your Du Pont Technical Representative will be pleased to demonstrate their advantages right in your own shop. E. I. du Pont de Nemours & Co. (Inc.), Photo Products Department, Nemours 2430-A, Wilmington 98, Delaware. In Canada: Du Pont of Canada Limited, Toronto.



BETTER THINGS FOR BETTER LIVING ... THROUGH CHEMISTRY

SYMBOL and CRONAR are Du Pont trademarks for polyester graphic arts films.



Cover

Once again, our cover features several of the excellent lithographed Christmas cards offered by the Metropolitan Museum of Art in New York. Year after year the Museum offers a striking group of cards, most of them utilizing famous paintings, sketches, etc. of the old masters, and many produced by offset.

> WAYNE E. DORLAND Publisher

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MODERN LITHOGRAPHY

VOLUME 27, NUMBER 12

DECEMBER, 1959

SUBSCRIPTION RATES: One year, \$4.00, two years, \$7.00. Canada and Pan America, one year, \$5.00; two years, \$9.00. Foreign, one year, \$9.00; two years; \$15.00. Group subscription (U. S. only) Four or more entered as a group, \$2.50 each, (Canada: \$3.00) (May be sent to different addresses.)

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A great new advance in offset duplicating by Gevaert now makes it simple, fast and inexpensive to reduce or enlarge—on aluminum offset plates—printed matter, drawings, microfilms or artwork at a fraction of the usual cost! And in less than one minute!

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Here's how simple it is. Just expose your original with a simple camera or enlarger to a sheet of Gevacopy Rapid. Place exposed sheet in contact with a Gevacopy Aluminum Plate and pass through special developing machine. Strip the negative from the plate, wipe down the plate with fixing solution and the plate is ready for the press. Cost to you—only 59 cents. What's more, if you already have an office copy machine, it can probably be used to develop the plates.



MAKE A PLATE IN 1 MINUTE WITH GEVACOPY RAPID!

... for only 59¢!

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MAKE "SAME SIZE" PLATES TOO, JUST AS EASILY

Gevacopy Contact Aluminum Offset Plates now in use by thousands of offices and commercial plants make "same size" plates just as easily and quickly. The process is the same, except that the original is exposed to Gevacopy Contact Paper on any simple contact printer. Time to make a beautiful professional quality printing plate—one minute! Cost—39 cents!

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Because the Gevacopy process was perfected by one of the world's greatest photographic companies, it

picks up every fine detail, reproduces your original with photographic accuracy. Because it produces aluminum plates, you get high press runs, precision work, great durability. You get scalpel-sharp reproduction time after time, and the plates can be stored if desired and used over and over. And because of the great simplicity of Gevacopy, you'll cut down makeovers—reduce wasted time and plates up to 75%, or even more!

Get the facts now on this major breakthrough in offset duplicating. Complete literature and details are yours for the asking. Write-phone-or wire today!

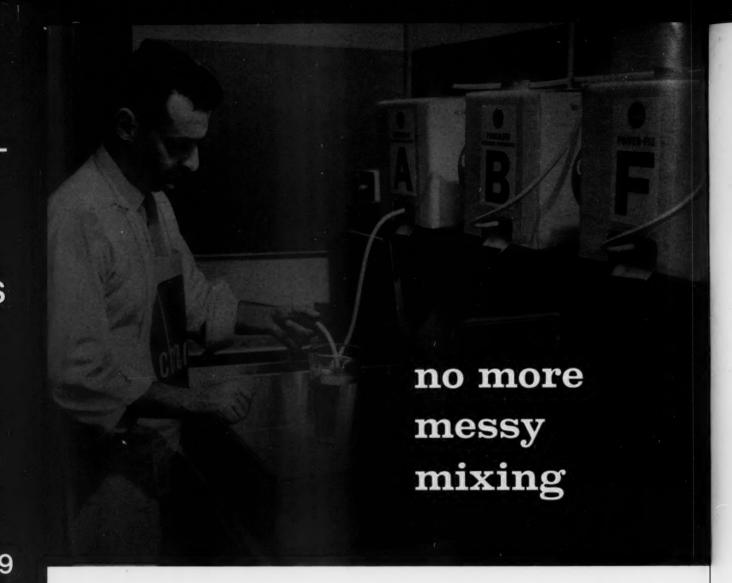




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Save with Powerlith Developer Concentrate

Now, Chemco introduces a pre-mixed, liquid, two-part formaldehyde developer concentrate ready for immediate use by simply adding it to water. Packaged in unbreakable 5-gallon Cubitainers. All you do is place container on shelf and draw off A and B concentrate as needed. No more dissolving powders with possible errors in formulation. No double handling. As developer is used, container collapses eliminating aerial oxidation and insuring unlimited shelf life.

Add undiluted Powerlith Concentrate to replenish tired developer, thus making one bath last an entire shift. One set of A and B 5-gallon containers makes 20 gallons of developer. Order a supply today, plus Chemco Power-Fix to complete your darkroom changeover.



Chemco Photoproducts Co., Inc.

Main Office and Plant - Glen Cove, New York

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<u>Important!</u>

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- MAXIMUM APPEARANCE
- FLAWLESS REPRODUCTION

Your Printing Deserves the Best!

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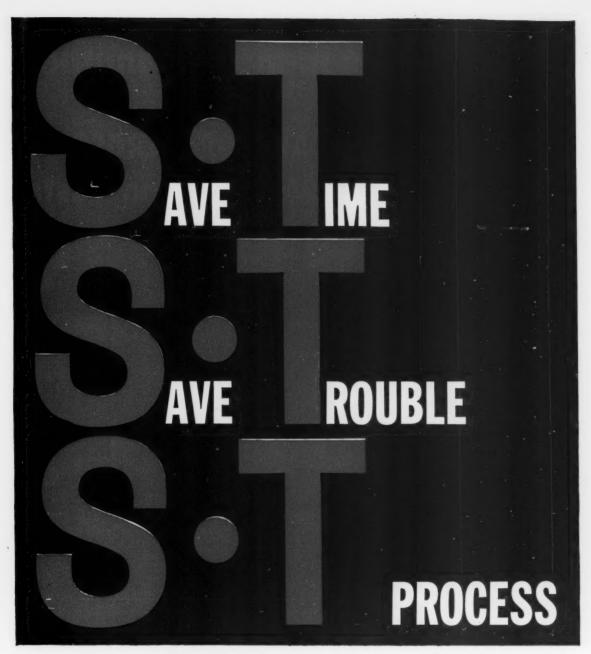
Looking for a film that "breaks sharp" from dense dot to clear base? Try Ansco Reprolith® Ortho Type C film. This superb emulsion offers critical orthochromaticity that responds cleanly to filtration, plus an extra margin of speed under modern tungsten light sources.

Try this fine film today. Also investigate the advantages of Ansco Reprodol® Developer. Ultra cleanworking and exceptionally stable, Reprodol is an important link in the chain of density and acutance. Ansco, Binghamton, N. Y., A Division of General Aniline & Film Corp.

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Reprolith Ortho Type C





The S-T Process combines precision grained aluminum plates with specially developed chemicals to give you a new time-saving technique for plate preparation. And you avoid on-the-press problems with the S-T Process: plates hold water, resist scumming, run sharp and clean. You can see the difference.

Put the S-T Process to work in your shop...and see immediate results in reduced preparation time and smoother press performance.

S-T plates are manufactured by Sumner Williams, Inc., and distributed nationally by the Harold M. Pitman Company.

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HAROLD M. PITMAN COMPANY

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One man tells another how

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NO-DRIP GREASE LUBRICANT

- · Won't splash, squeeze out or drip
- · Protects bearings, cams, gears etc.
- · Unique formula prevents rust and wear ... longer



ANCHOR-IT

PRESSURE SENSITIVE ADHESIVE

- · Spray it-to stick it!
- Versatile holds metal, rubber, plastic, film, paper etc. to any smooth surface



EX-STATIC

STATIC ELIMINATOR

- Stops jam-ups . . . fast! Dependable
- Removes static prevents slow-downs
- Greaseless invisible - non-inflammable



INKOTE

PREVENTS SKINNING OF INK

- Eliminates extra wash-ups
- Cuts ink waste in fountain and can



Other Anchor Aerosols: Repelzit, Sans Aqua, Robinol, Film-Kleen



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Send on money-back guarantee thru nearest dealer

JET-GREASE__can(s) \$2.25 -carton(s) of 12-\$23.00 ANCHOR-IT___can(s) \$2.25 -- carton(s) of 12-\$23.00

EX-STATIC____ can(s) \$3.00 -- carton(s) of 12-\$30.00 INKOTE____ can(s) \$3.00 --carton(s) of 12-\$30.00

Prices slightly higher west of Mississippi

for excellence economy and performance

OFFSET INKS

- . SET QUICKLY AND DRY FAST
- GIVE EXCELLENT GLOSS WITH MINIMUM DRYBACK
- . PRINT SHARP AND CLEAN
- . ELIMINATE SMEARING AND OFFSETTING
- . PERMIT BIGGER LOADS

Unanimously acclaimed during nation wide trials, <u>ACCELOGLOSS</u> is a major advance in inkmaking. Try <u>ACCELOGLOSS</u> today—you'll be amazed at its performance.

Sinclair and

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REEVES BROTHERS: MAKERS OF VULCAN DUROFYNE BLANKETS FOR BETTER IMPRESSIONS

9

"CRONAR® FILMS HAVE INCREASED OUR PRODUCTION BY 25%, SAVE MORE THAN 60% ON JOBS THAT ONCE REQUIRED GLASS."

-Mr. Charles Packard, President, Art Lithocraft Co., Kansas City, Mo.

Art Lithocraft Company produces about 35,000 square feet of plate area annually. "Most of our work," explains Mr. Packard, "involves three and four color jobs, although we handle six and eight color process plates, too. We've found that no other film can equal CRONAR for dimensional stability. Many plates are made on step-and-repeat machines where film is subjected to intense heat at regular intervals. We can tolerate only .001" dimensional change on some jobs, but we have no trouble maintaining these standards with CRONAR Films. At present we use CRONAR Pan Litho for direct screen separations and also CRONAR Pan Masking, CRONAR Transparency, CRONAR Reflection and CRONAR Ortho A. Because these films are so easy to handle, we've increased our production by as much as 25% to 30%. This improvement in our efficiency is a valuable competitive advantage."

There's a CRONAR Graphic Arts Film to cut costs and increase your production, too. Contact your Du Pont Technical Representative for more information. E. I. du Pont de Nemours & Co. (Inc.), Nemours 2430-A, Photo Products Department, Wilmington 98, Delaware. In Canada: Du Pont of Canada Limited, Toronto.



Mr. Charles Packard, left, discusses the space-saving advantages of CRONAR Films over glass plates with Du Pont Technical Representative John S. Wigginton, Jr. Symbol and CRONAR are Du Pont trademarks for polyester graphic arts films.

This advertisement was prepared exclusively by Phototypography



Better Things for Better Living
... through Chemistry



PRIDE IS THE DIFFERENCE

Atlantic Pastel

Cover and Offset

Adds an extra color to a wide variety of printed pieces without additional printing cost. Six attractive, matching colors. Distinctive Suede Finish. Atlantic Pastel lends dignity to fine printing, boosts eye appeal, sets a delightful mood for creative effects.

Available through your Franchised EASTERN Merchant, or write direct for a generous sample.



EASTERN

EASTERN FINE PAPER AND PULP DIVISION
STANDARD PACKAGING CORPORATION
BANGOR, MAINE

Brink Still Active in Map Making

JOHN BRINK is back in the news again. In case you don't place him at once, he's the artist who, over four decades ago, came up with an idea which eventually put Rand McNally & Co. on the map as the world's largest printers of maps.

Now 76, Mr. Brink has retired from active duty as head of the "Blazed Trails" department in the big Rand McNally printing plant at Skokie, Ill.

In his Evanston, Ill. home Mr. Brink is busy in his studio drafting maps and putting together descriptive matter for a new book for tourists that will be titled "A Directory of Places of Interest in the United States." A newspaper reporter who discovered him there, says that, so far, Mr. Brink has created more than 2,500 drawings and has collected material on 7,000 places of interest throughout the nation. He hopes to have the volume off the press by Jan. 1, 1961, when he and Mrs. Brink observe their 50th wedding anniversary.

As reported in M. L. (July, 1956) Rand McNally in 1917 produced a map of Illinois, first of its kind, which showed all marked highways then existing in the state. It had been created by Mr. Brink, then a free lance commercial artist and draftsman. Eventually this led to road maps of all the other states and production of more than 60,000,000 road maps a year for oil companies, tourist agencies, state governments and other customers. And that's just one part of the firm's map printing business.

A recent Sunday feature story in the Chicago Tribune, entitled "He Made the Highways Happy Ways," throws some additional light on Mr. Brink's start with Rand McNally. Back in 1916, the reporter related, he had his own art studio in Waukegan, Ill., and among other pickup jobs he was drafting county maps for the printing company. Somehow they lost that county map publishing account and to make up for it, a contest was mapped out with a \$100 prize for the best idea for a new type of road map.

Brink won the \$100 prize with his idea for a map on which each road is

identified by a distinguishing symbol, and in the bargain got a full time job designing road symbols and drawing the maps.

These were printed on 12 x 18" cardboard which Brink himself and others at first personally posted on utility poles along the highways. Later he suggested another big idea, adopted by Washington authorities, for a system of numbering the roads that is in use today.—H. H. Slawson

C. H. Colman Retires

C. H. Colman, assistant to the managing director of the Graphic Arts Association of Cincinnati, Inc., retired Oct. 30 after 25 years with the association.

During his time he handled employment, budgeted hour costs, equipment and methods, and certain labor relations for the association.

Mr. Colman said he looks forward to his retirement years, which he will devote to his life-long hobby of dogs and serving as judge at dog shows throughout the country.

Succeeding Mr. Colman as assistant managing director is Donald J. Mills, a graduate of the College of Business Administration, University of Cincinnati, who has been with the Graphic Arts Association since last mid-April.

Meetings

Southern Graphic Arts Association, 39th annual convention, Hotel Eola, Natchez, Miss., April 21-23, 1960.

Lithographers and Printers National Association, annual convention, Boca Raton Club, Boca Raton, Fla., April 25-28, 1960.

National Association of Lithe Clubs, 15th annual convention, Hotel Statler, Boston, May 19-21, 1960.

Technical Association of the Graphic Arts, 12th annual meeting, Washington, D. C., June 20-26, 1960.

Printing Industry of America, 74th annual convention, Sheraton Park Hotel, Washington, D.C., Oct. 24-27, 1960.

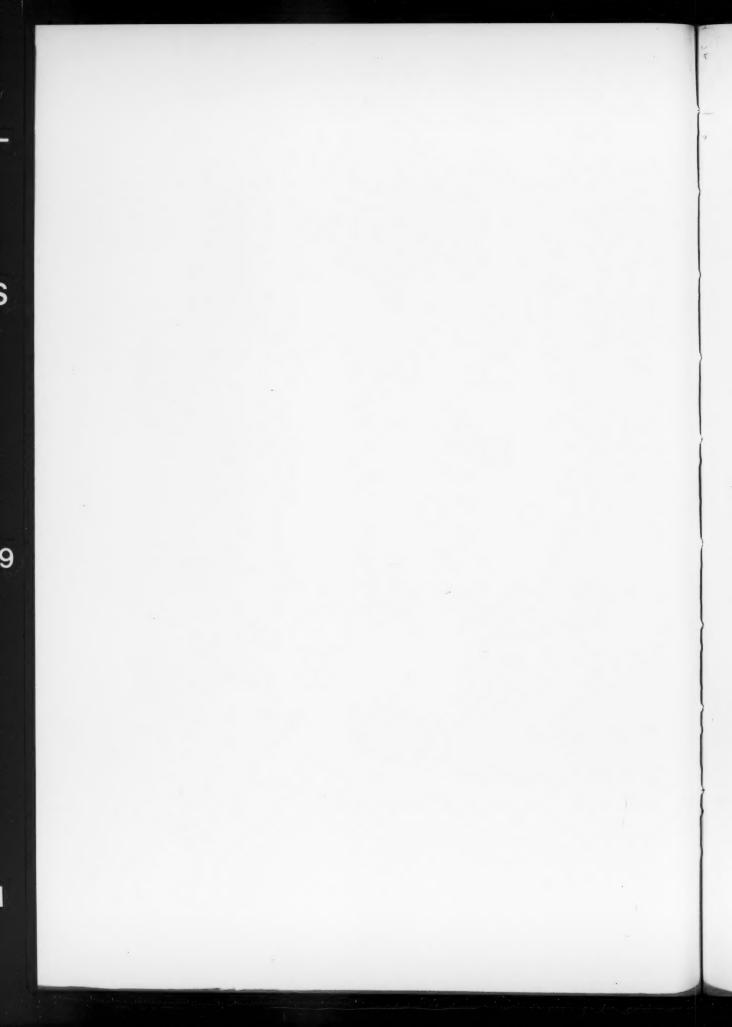
National Association of Photo-Lithographers, 28th annual convention and exhibit, Hotel Conrad Hilton, Chicago, Oct. 5-8, 1960.

National Metal Decorators Association, 26th annual convention, Shoreham Hotel, Washington, D. C., Oct. 17-19, 1960.



PRIDE IS A DAUGHTER. Watching her put aside dungarees for an evening dress, mocassins for high heels. Pride. The ingredient that makes a man want more for his family, demand more from himself. Pride. The mark of fine printers. The mark of Atlantic fine papers.







"Susan" by John McClelland

To you—and especially to the children you hold dear—a Merry Christmas from the makers of Howard Bond, and . . .



"Timmy" by John McClelland

from Maxwell Offset . . . a wonderful New Decade!

Forerunner of our dollar was the Spanish milled dollar, better known as the "piece of eight." To make change, people often broke it into eight parts or "bits." That's why today we call a quarter "two bits."



TIME ACCOUNTS FOR 65 CENTS OF EVERY LITHO PRODUCTION DOLLAR. That's why Felton Colwell of The Colwell Press, Minneapolis, Minn., thinks the aluminum presensitized plate is the most important single contribution to offset lithography in recent years. It saves time . . . and that saves money. For other advantages, please turn the page. **ALUMINUM COMPANY OF AMERICA**

Colwell Press slashed production costs with presensitized litho plates of

Alcoa Aluminum

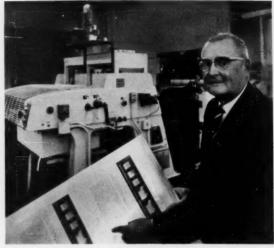
The Colwell Press, Minneapolis, Minn., has been in business more than 60 years, has been in lithography since 1943, and was one of the pioneer (1950) users of aluminum presensitized plates. Today, 80 per cent of Colwell's production is lithographic.

That certainly qualifies Felton Colwell, second generation head of the firm, as an expert. Named Graphic Arts Man-of-the-Year in 1957, Mr. Colwell stated recently that he considers the aluminum presensitized plate the most important single contribution to lithography in recent years.

The old saw "time is money" applies to printing more than to most industries, Mr. Colwell reminds. Platemaking time, makeready time, press down time, remake time, correction time—in all these operations, the aluminum presensitized plate has effected real economies.

Getting down to specifics, Mr. Colwell states, "You get an even, uniform coating . . . it's made to a standard, so burning can be made to a standard. The imperfections of whirling and handcoating, with their margin of human error, have been eliminated. Plates come packaged, so there's less chance of light damage. The smooth surface eliminates conflict between graining and screening. We get longer, cleaner runs with perfect dot structure . . . now fine line and halftone work is routine."

Today, the overwhelming majority of printers with exacting litho assignments have switched to offset plates of ALCOA® Aluminum. There are sizes and types for every job—deep-etch, presensitized, bimetallic and trimetallic plates. Aluminum takes a fine, sharp, deep grain . . . per-



Printing industry leader, Felton Colwell, is past president of the Research and Engineering Council of the Graphic Arts and has served on the Board of Directors of the Lithographic Technical Foundation. Mr. Colwell states that economy and better printing results prompted the switch to aluminum litho plates at Colwell Press.

mits a finer screen . . . requires less water, ink and pressure . . . gives clean, sharp impressions with good color "punch" on longer runs.

ALCOA pioneered the development of aluminum for lithographic plates and today offers uniform litho-quality sheet and foil for this application. Aluminum plates are economical . . . cost less to buy, less to use.

Lithographic plates of ALCOA Aluminum are available through reliable manufacturers and suppliers. Let us send you a list of these suppliers and our new folder about aluminum plates. Write ALUMINUM COMPANY OF AMERICA, 1851-M Alcoa Building, Pittsburgh 19, Pa.



Fine litho craftsmen at Colwell Press include Pressman Dave Cotterman and Foreman Mel Ferlaak. They particularly like the smooth, uniform surface of an aluminum presensitized plate. It holds perfect dots, delivers a better printing job.



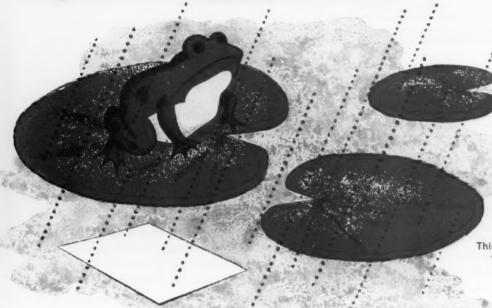
"It's quicker to get them on the press and get running," says Dave Cotterman of aluminum plates. Aluminum is easier to handle and store because it weighs only one-third as much as other lithographic metals.

Look for this label . . . it's your guide to the best in aluminum value

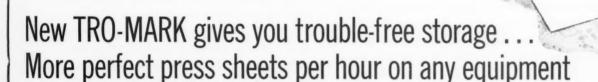


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Through all kinds of weather... new TRO-MARK adhesive papers stay







Here are the facts about TRO-MARK, the amazing new adhesive paper. You can count on it to lie perfectly flat in storage, on the press... before and after printing. Actually, TRO-MARK feeds, prints, delivers, jogs, perforates and die-cuts just as if it had no adhesive at all!

The clarity and sharpness you can get when you print on TRO-MARK are truly remarkable! Use this new adhesive paper for any kind of printing . . . letterpress, offset, or multilith on the ungummed side . . . even print the gummed side by letterpress if desired. You'll get more perfect press sheets per hour on any equipment!

It all adds up to more production advantages than with any adhesive label paper you ever used before. Try Tro-Mark yourself and see!

The Gummed Products Company

Troy, Ohio . A Division of St. Regis Paper Company

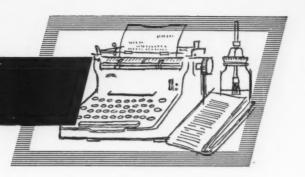
LOOK AT THESE TOP ADVANTAGES OF TRO-MARK*

- Better Printing Surface because the adhesive is neither broken nor stack calendered. You get excellent reproduction using less ink than with other stocks.
- Trouble-Free in Storage TRO-MARK stays flat, will not curl or block under a wide range of temperature and humidity variations.
- Allows Longer Press Runs TRO-MARK stores beautifully after printing, allowing you to run larger quantities of labels without fear of in-storage spoilage.
- More Perfect Sheets Per Hour on all types of printing equipment because TRO-MARK stays flat even under multiple press run.

*"TRO-MARK" licensed under Patent #2793966

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EDITORIALS



Investment In Research

A MONG the well-attended exhibits at the NAPL convention in Kansas City last month were those of several large suppliers—3M, Eastman Kodak, and DuPont. Each had new products or methods to show in the field of photography, photocopying and platemaking.

The exhibits once again brought home the fact that the lithographic industry owes much of its success in recent years to progressive companies like these who are willing to spend hundreds of thousands of dollars for research.

Time was, not so many years ago, that organized research in our industry was virtually non-existent. Then came the LTF, with only a token budget for many years. The Foundation got greater impetus during and after the war and has made many accomplishments, most notably in the field of platemaking.

Dramatically accompanying the results emanating from Glessner House have been the growing list of developments produced by private industry research (often in cooperation with LTF). New developments in plates—presensitized, bi- and trimetal and wipe-on, film and camera improvements, press modernization and newer, more versatile chemicals have made the day to day job of the lithographer easier and more efficient. In many instances, these developments have enabled the lithographer to bid successfully for the jobs that he never had a chance on before.

The smart lithographers were quick to realize the advantages inherent in many of these developments and so adopted them in their plants. But too many others have lagged behind, content to use the processes and procedures that were successful in the 'thirties and 'forties but a bit outmoded today. They do not realize, or simply ignore, the obvious conclusion that to do so means eventual financial ruin for the company.

The danger of this backward attitude is two-fold: First, it indicates that too many shops are ignoring valuable tools for increasing business and for demonstrating that lithography is a high quality process, suitable for the finest jobs. More importantly, however, their refusal to try anything new may discourage the supply firms from spending still more money on graphic arts research.

A representative of one large supply firm, with interests in many other fields, told ML recently that his company had spent nearly a million dollars and several years of research in the development of products for the graphic arts.

"We can understand that lithographers won't jump on the bandwagon immediately for every new product that comes along, but at the same time, if, after a reasonable period, we find insufficient interest in our products, we will turn our attention—and our research funds— to more enlightened industries."

Who can blame them?

Quote of the Month

'There will be more and more web-offset presses installed as time goes on. That they will take a larger percentage of their business from sheet-fed equipment is unquestionable. They will secure some of their business from the letterpress printer. Their economy of operation, plus the fact that there will be a continuing spread between the cost of sheet paper and roll paper, all indicate a bright future for this method of printing.' (See page 43)—Ronald I. Drake, Champion Paper and Fibre Co., at NAPL convention.







Officers and board members of NAFL (left) pose for annual photo. At right (top) Walter E. Soderstrom, NAPL executive vice president; Public Printer Blattenberger; Arthur Mahnken, Sinclair & Valentine; and Rob-

ert Brunhouse, Fairchild. (Bottom) NAPL staff members Mike Gruenerwald, Frank R. Turner, Jr., Mrs. Erna Keiden and Robert S. Emslie, Jr., outside banquet room.

NAPL Meets in Kansas City

THE NAPL convention in Kansas City last month climaxed a busy year in the graphic arts, coming as it did only two months after the big exposition at the Coliseum in New York.

The National Association of Photo-Lithographers drew more than 2,000 to its 27th annual convention and exhibit. The group was saddened on Friday to learn of the death of Harvey Glover, long-time NAPL member. Exhibitors totaled 180 in the huge Municipal Auditorium.

The meeting program, much fuller than in recent years, drew good audiences in the Muehlebach, where the sessions ran from Nov. 18-21.

Meeting highlights included:

• Reelection of all officers for another year. Stanley R. Rinehart continues as president; J. Tom Morgan, Jr., vice president; William H. Glover, Jr., treasurer; and George Carnegie,

secretary. All staff members continue.

- Adoption of an engrossed resolution in praise of Penn R. Watson, who for many years served as a member of the board of directors and treasurer of the association.
- Addition of several new members to NAPL to bring the total to a new high of 1,187.
- Selection of the Conrad Hilton Hotel, Chicago for the 1960 convention, Oct. 5-8.

At NAPL (I.-r.): Mr. and Mrs. Nat Gamse, Gamse Litho; Mr. and Mrs. George Carnegie, Consolidated Litho; Alex Cattanach, Bradford-Robinson; Patrick

Ash, Conner, Ash & Co.; Thomas Beckley, Consolidated Water Power; Jack Schoenberg, Case-Hoyt; and Norman C. Bernhardt, Niagara Litho.







The social program included the annual dinner dance and entertainment on Friday evening, several cocktail parties by suppliers, and visits by the ladies to the circus and the Truman Library in nearby Independence.

Public Printer Blattenberger gave the invocation for the convention and Dr. William T. Alexander gave an inspirational address at the Thursday luncheon.

Following are highlights of the talks presented at the business sessions:

Drake: Offset Papers

The impact of web-offset on paper manufacturers was described in an address by Ronald I. Drake, technical director of customer services for The Champion Paper and Fibre Co. The growth of this phase of lithography has made it necessary that paper companies develop coated papers for these presses.

The other major problem facing the mills, he added, is to further modify and improve coated offset enamels while endeavoring to hold the line on cost.

"In the beginning the story was that just any old paper would run on these presses. That idea has been pretty well exploded by now and both lithographers and papermakers generally are recognizing that something more than just the regular run of letterpress enamels is necessary to secure successful and profitable operation of these presses."

There is some difference between presses, he added, and a real problem exists where inadequately trained operators (usually hasty converts from letterpress) are used to run the web equipment.

"As we see the picture today, there will be more and more web-offset presses installed as time goes on. . . . Their economy of operation, plus the fact that there will be a continuing spread between the cost of sheet paper and roll paper, all indicate a bright future for this method of printing."

He predicted that eventually quality will equal sheet-fed work, and that the mills will have "on-the-machine coated paper, produced at high speeds, using new techniques and new materials."

Mr. Drake traced the development of offset paper from 1912, when the first color reproductions by offset ap-

New Directors

Following are new directors elected at the NAPL convention in Kansas City last month:

THREE YEARS: Hugh W. Ashton, Ashton-Potter Limited, Toronto: M. R. Bailey, The Craftsman Press, Inc., Seattle: Thomas E. Brinkman. Cincinnati Lithographing Co., Inc., Cincinnati: Alven S. Ghertner, Cullom & Ghertner Co., Nashville; William H. Glover, Jr., Sweeney Lithograph Co. Inc., Subsidiary of Federal Paper Board Co., Inc., Belleville, N. J.; Benito J. Lagueruela, Editorial Omega, S.A., Havana; Joseph F. Matlack, Edward Stern & Co., Inc., Philadelphia; Carl A. Schaubel, Dunlap Printing Co., Philadelphia; William J. Smith, Smith Grieves Co., Kansas City: A. L. Tucker, Sauls Lithograph Co., Inc., Washington, D. C.

Two YEARS: Arthur T. Howard, A. T. Howard Co., Boston.

peared on the market. He noted that the label industry pressured the mills into producing a coated sheet for offset in the early '30's. When the coated one-side sheets were produced "the offset printer found himself for the first time really able to compete with the letterpress printer from the quality standpoint and able to offer the customer some real savings."

He went on to describe the development of two-sided coated offset sheets, and to tell of the introduction of the machine coating method in first, letterpress and then offset paper. (Complete text, page 43)

Barnes: Colored Paper

Many printers and lithographers are unaware of the fine opportunities for utilizing colored paper in printing, according to Roy M. Barnes, Jr. Mr. Barnes is sales promotion manager for Du Pont. He declared that colored papers offer the printer and lithographer an excellent method of producing a variety of effective colored results, but that so far these opportunities are being largely ignored.

He disclosed results of a survey that showed the printer and lithographer exert the major influence in the selection and purchase of paper, but that they have, for the most part, ignored colored stock. "Printers and lithographers know that color is important and that its use is increasing. However, they admit that they themselves are not fostering its use; in fact, they seem to avoid it, whether it be colored ink on white paper or black or colored ink on colored paper. . . . One tremendous roadblock to the use of colored paper is the survey finding that 64 percent of the printers feel that most customers who ask for "color" really want color printed on white stock."

On the positive side, however, he cited these advantages which printers see in the use of colored stock:

- 1. Improved appearance without greatly increased cost,
- 2. Greater area for use of artistic talents, and
- Cheap answer to customer's demand for color.

He went on to list a number of advantages of colored paper, as reported in the survey.

He said a Color Council was formed at Du Pont to help answer some of the questions (concerning legibility, use of halftones, etc.) that arose from the survey. The Council found that colored paper can provide a "unifying influence" to a layout, that it can be used to create a special mood, and can help an illustration "look more authentic."

He said that the Color Council is continuing its research, and that it is publishing a magazine called *Design and Colored Paper* which demonstrates some of the artistic potentialities of colored papers. (Complete text, page 45)

'Miss Roll-O-Graphic'









At the Muehlebach (I.-r.): Harry W. Webb, Wm. N. Cann Co.; Louis Nye, Consolidated Water Power; Kenneth Green and Terry Tormoen, both Nekoosa Edwards; and William N. Cann, Jr., Wm. N. Cann Co.; Harold

Deal, and Thomas Buchanan, both S. & V.; Mr. and Mrs. Russell Johnson, Du Pont Printing Div; Mr. and Mrs. Samuel Frock; Clifford Johnson, Litho Service Co.; and Robert Brunhouse Fairchild, Inc.

Morgan: Quality Levels

How one leading lithographic firm set up quality standards in its plant and greatly improved its product was described by J. Tom Morgan, Jr., president of the Litho-Krome Co., Columbus, Ga.

Called "Color under Control," the Litho-Krome system starts with a 15-step tone value scale so that employes have a common denominator with reference to halftone dot values on film. This development stemmed from the "startling discovery that a simple thing like tone was not clearly defined in our vocabulary."

Each number in the 15-step scale has a given density reading. When printed on a specific sheet, the staff was then able to see what a No. 5 dot looked like on paper. Next, norms were established for a variety of paper stocks. For colors, the appropriate filter was

used on the reflection densitometer.

"We now were assured that we knew ourselves what we were talking about and we were assured of complete understanding when discussing a dot size or tone value with one of the other members of our control team."

Next a color chart was prepared, to show the effect of the various tone values in combination, for use in predicting the color that will result from various combinations of magenta, cyan and yellow. Mr. Morgan urged other lithographers to prepare such color charts in their own shops, on a variety of paper stocks.

The speaker went on to cite five major areas in which quality control must be watched carefully: copy, camera, dot etching, platemaking and press. He elaborated on each topic, offering suggestions for quality control. He climaxed his talk with the observation that "a quality control plan should always have as its goal quality lithography. If it is anything less, it could easily be named a cheap control plan and its end product cheap lithography." (Complete text, page 34)

Graham: Creative Printing

"The time is long past due for printers and lithographers to get started selling and producing creative idea printing and get out of this competitive rat race that is driving profits down to the point where the investment in equipment is producing a poor return."

That was the assertion of another convention speaker, Walter B. Graham, president of Printers' Sales Idea Service Co., Omaha.

Mr. Graham cited the typical case of the lithographer who attempts to get an order for printing forms, by

Going to the Dinner-Dance (I.-r.): Mr. and Mrs. Albert Tucker, Sauls Lithograph; Arthur Eckert, Columbia Planograph; NAPL president and















In the lobby (i.-r.): Frank Oehme, Consolidated Water Power; James T. Downey, Downey Litho Supply Co.; Fred T. Lerway and Sidney Levine,

both Consolidated Litho.; group of husbands and wives heading for banquet table on Friday evening.

trimming his quotation to the bare minimum, only to find that he has been underbid by a hundred dollars or so.

He said he feels bad when he sees signs that read "Job Printing Done Here." "How much better it would be," he observed, "if those signs were changed to read "Creative Idea Printing Done Here."

We all tend to envy the printer who specializes in a particular phase of the printing business "but the truth is we can all specialize in creative printing without investing in more equipment . . . and with greater profits."

In selling idea printing, he went on, "you can make more profit on a \$50 order than you can on a \$200 bid job." Your best prospect is not the purchasing agent who is interested in price but the head of the firm or the sales manager who are interested in ideas.

Wells: LTF Research

A report of steady progress at the Lithographic Technical Foundation was given by Otis E. Wells, of Western Lithographic Co., a director of the foundation. Mr. Wells, a past president of NAPL, concluded a long survey of the various phases of LTF research with the assertion, "I like the idea of being a member of the Foundation. It's like adding an entire department of technical experts to my plant's operations and at such a low cost that it's almost ridiculous.

"And I like the idea of backing their efforts in research and education because I know that a good deal of my future success and ability to compete will depend on their success — their work that will make it possible for me to do better printing at a lower cost . . . every progressive plant should be a member of LTF."

Mr. Wells went into detail in describing LTF research in photography and color correction, physics and quality, metals and surface chemistry for platemaking, and paper and ink.

He declared that LTF's recent work on photography and color reproduction "has produced a very signficant and general improvement in the color work being done in the industry. This has resulted mainly from LTF's survey of color reproduction that was made two years ago and later introduction of the concept of balanced inks. There is now a much better understanding among lithographers of the relationship between paper and ink and the importance of using balanced inks."

Mr. Wells also praised the LTF Color Seminars, newly developed tools for aiding in quality control, and several recent publications offered by the Foundation.

(I.-r.): William Steinruck, Grinnell Litho.; Herbert Brooks, Roley & Brooks; Sidney Augarten, S. & V; Donald Herd, McCall Corp., Charles Capazza,

S & V; Warren Andrews, W. E. Andrews Co.; George R. Hubbard, Jr., Hubbard Inc.; and David Gandelman, City Printing Co.







Current: Sensitized Materials

Another speaker traced the background of study and experimentation that precedes the introduction of any new product in the photographic line.

"It may turn out, however," according to Ira B. Current, manager of the standards department of Ansco, "that what is wanted may not really be good for those who desire it, because of the inflexibility of their working conditions . . . for instance, increased sensitivity (of film) might be sabotaged by higher safelamp sensitivity. Non-standard processing temperatures may lead to stripping problems."

He summarized by saying consumer requirements plus the manufacturers' capabilities, yield the product performance. "Since a special product cannot be made for each consumer, our composite consumer is a weighted one representing the best average of all those who find a given product the answer to their requirements. The product performance is also limited by the manufacturing capability to produce a material meeting the consumer's needs. What we end up with is a product, manufactured with all characteristics falling within a limited range, that is intended to be used under conditions that are also limited in scope.

"When the ranges overlap, everyone is happy, but when some characteristic falls outside this happy operating ground, the field representatives have a field day, and perhaps it is time to be considering a new, improved product."

Rinehart: Good Planning

"Good Planning, plus people, equals profits." That was the theme of Stanley R. Rinehart, NAPL president, in the opening convention address. Mr. Rinehart, manager of the printing division of E. I. du Pont de Nemours, & Co., asserted that "the successful operation and growth of a lithographic business requires management planning — not just for today's operations—but also for the future."

He went on to say that this is not an easy task, particularly with lithographers who are "drifting . . . thinking only for the present . . . they are not developing people in their plants who can help manage, and because their management is thin, their profits are also thin."

He decried the use of "ingenious management" by which one man attempts to juggle all the jobs of president, estimator, plant manager, purchasing agent, sales manager and salesman.

He said that management planning is just as essential for the small company as for the medium and large size firms. This planning should be backed up with such things as a good accounting system, time standards, adequate markup, sound purchasing and prompt billing.

As for planning itself, he went on, it should consist of three things:

- 1. Make a study
- 2. Set realistic objectives
- 3. Set a timetable

He enumerated a sample set of objectives and told how to follow through with them.

Robinson: Magnetic Printing

Development of magnetic ink encoding was related by Edward A. Robinson, vice president of the J. C. Hall Co., and chairman of LPNA's Bank Stationers Section.

Mr. Robinson termed the development of magnetic ink encoding for checks a logical one, considering the large number of checks cleared each year (12-15 billion) and the fairly uniform way in which they are handled in the bank. He said that after a long period of analysis, magnetic ink encoding evolved as the only really practical method for handling checks.

He went on to describe the many complex problems involved in imprinting the special magnetic alphabet on the checks so that they will be readable in the electronic sorting equipment.

He emphasized the importance of quality control, to assure best possible register of the numbers. At best, however, it is fairly certain that no lithographer will be able to guarantee that his product will conform 100 percent with the specifications.

"We do, however, feel we can assure our customers that a high percentage of our encoded information will be in conformance with the specifications, and also that a high percentage of total documents will be readable in the equipment."

Other applications for magnetic encoding include airline tickets, retail credit reports, public utility bills, as well as some of the credit card agencies, according to the speaker. "As soon as the check program gets under way and experience is gained, other industries will be quick to study its use for application to their operations."

Thaxton: Exposure Control

A new development, which may mean savings in time, money and materials, was outlined in a technical report by Karl L. Thaxton, technical investigator for Du Pont.

His talk, entitled "A New Approach to Exposure and Processing Control," dealt with the development of a special computer which, when set up with various factors, can be used to determine exposure time.

"With a given light source and developer team, there is only one exposure and one set of processing conditions which will yield the desired results," he declared. The Du Pont computer is aimed at eliminating the guesswork that goes on in many photographic departments over time of developer, exposure, etc., he explained.

The computer simultaneously answers the two prime questions every cameraman asks himself every time he goes into the darkroom: "What is the correct exposure time?" and "What is the correct development time?" The principle upon which the operation of the computer works, he went on, is based upon reproducibility of results . . . it will not work if the variables are not controlled at all times.

Mr. Thaxton showed slides of rectangular coordinate curves to illustrate how various combinations of exposure and development affect reproducibility. To conclude his talk, he worked out several practical problems on a large model of the computer, which, in effect, replots these rectangular curves in terms of spiral curves.

"To complete the development of this instrument," he said, "will be a time consuming and expensive task and before we go any further with it we want to know if you think it will be useful to you and if you want it."

Brinkman: Mechanized Accounting

A mechanized way of obtaining complete accounting information, which has saved time and money and which gives officers and salesmen a quick and accurate record of their activities, was explained to the convention by Thomas E. Brinkman, vice president of the Cincinnati Lithographing Co.

Mr. Brinkman's talk revolved around his company's installation of a National Cash Register Model 31 machine several years ago. He told how the machine is used at his plant to produce all sorts of sales information.

It yields such information as monthly sales, material costs, total productive hours spent on each job and the dollar value of these hours, commission on the job, information on make-overs and the profit and loss on each job.

"A recap of the seven salesmen's sales gives us our sales analysis for the month, our cost of sales for the month, and our gross profit. In addition, it tells us which salesman is making us the most profit."

He said the entire sales analysis for the company takes only about 30 hours a year, and that it has eliminated duplication and isolated errors.

New Product Reports

Reports of new products and product improvements were given in eight other talks.

Three reports were concerned with presensitized plates. Speakers were A. J. Huber, Minnesota Mining and Mfg. Co., who discussed evolution of the plates; Cal D. Harman, Lithoplate, Inc., subsidiary of Harris-Intertype Corp., who talked about his company's product; and E. B. Fritz, of Azoplate Corp., whose topic was presensitized plates yesterday and today.

The men traced the development of presensitized plates after the war up to the present. They told of the ease of handling, the ever-increasing press runs attainable with presensitized plates, heavier gauges, larger sizes, and, in several cases, two-sided plates.

(Continued on Page 109)

NAPL Technical Session Handles Many Questions



Moderator Stevens directs a question at the technical panel

THE usual wide variety of questions on litho problems was fired at a five-man panel moderated by William J. Stevens of Miehle, at the NAPL Technical Session on Saturday.

Panelists included Michael H. Bruno, LTF, research; George D. Krug, Krug Litho Art Co., camera and plates; Richard J. Schmied, West Virginia Pulp and Paper Co., press and paper; and Philip E. Tobias, consulting engineer, technical and plant procedure.

Some of the typical questions and answers at the technical session included the following:

Q: What is the difference in making a bi- or tri-metal plate, as compared with a deep-etch plate?

Bruno: The platemaking process is essentially the same, with only very minor changes.

Q: What progress is being made by the paper manufacturers to give us a better sheet for web-offset?

SCHMIED: Mills are conducting research to improve the stock. Many shops now are using a coated letterpress sheet—a big improvement over recent years. New dampening developments utilizing less water, may enable the web-offset pressman to run coated stock with greater ease.

Bruno: There is a trend toward an all-purpose paper for offset and letterpress, as lithographers learn to run with less and less water. One other factor is that the offset sheet must be flat all the way across its width, because of its intimate contact with the blanket. A letterpress sheet has a gutter on each side, where the sheet does not strike, which provides a small margin for error.

Q: Is it economical to use masking for a single piece of copy for a display?

KRUG: Masking can do a very good job of removing or adding color without loss of detail. It is not necessary that masking be used on every job but it certainly has its place, even for the shop using it only occasionally.

Q: Can four-color process jobs be done on two two-color presses of different manufacture?

SCHMIED: Pretty good results can be obtained but there may be trouble with register. Need excellent front and side guide register and a dimensionally stable sheet to insure success.

Bruno: The LTF Register Rule is a vital aid in a job like this.

Q: What is being done to eliminate sheet to sheet misregister, caused by the intermixing in the mill of sheets produced on several different paper machines?

SCHMIED: The paper mills recognize this problem, which arises from the use of multiple sheeters. We are seeking a solution.

AUDIENCE: Electronic control of moisture in the sheets is being tested to see if it will assure that all sheets will have similar characteristics, regardless of the machine on which they are produced.

Next Year
Conrad Hilton Hotel
Chicago
Oct. 5-8

Color under Control

By J. Tom Morgan, Jr.
President, Litho-Krome Co.
Columbus, Ga.

.....

UR industry, as we all know, has experienced the greatest decade of progress in its history. Of course, it has been a great experience for all of us to have played an important role in this history-making era of expansion and technological development. Indeed it is difficult to realize that as late as 10 or 15 years ago, offset lithography was regarded as "the gray medium" of illustrative reproduction. No question about it, lithography's capabilities in the field of full color portrayal were not to be compared with those of some other methods of putting ink on paper. When it came to process color, the hue and cry was, "if we could just do it as well as letterpress!"

The last decade may well be described as "The Era of Awakening" for offset lithography! While it is true that lithography was invented by Alois Senefelder more than 160 years before this period, it was not until our time that the process came of age as an effective and practicable medium for mass reproduction of fine art and color photography. It would be sheer speculation to say that even the most optimistic dreams of the inventor have been surpassed. However that may be, who would dare predict the future?

Reasons for Growth

There are many reasons for this accelerated technological growth. No

evaluation of the factors responsible for the expansion of our industry would be possible without recognizing the tremendous contribution which our suppliers have made to lithography. Improvement in technique and products through research and productivity have provided the lithographer of 1959 with the tools and materials essential to serving the requirements of our rapidly growing market.

The paper manufacturing industry has exhausted vast research budgets in a dedicated program to provide paper stocks with maximum utility for lithographic production. The manufacturers of lithographic presses, offset blankets, lithographic plates, films, chemicals, cameras and inks, to mention a few, have all served us well in the creation of know-how and facilities with which we may do a bigger and better job.

It is true that our market, as well as our capability, has grown at an amazing pace during this golden decade of enlightenment and prosperity. The conversion era from black and white to full color reproduction in advertising illustration . . . in magazines, on billboards, in direct mail and at point of sale has passed, and the era of color is, in fact, now about to become reality. Yesterday, black and white advertising was vainly trying to compete with full color reproduction. Much of this full color portrayal was, to be sure, of dubious quality. However, it was color and even such as it was, it was indeed more effective than black and white. Tomorrow, this same mediocre full color will be confronted with a nemesis just as formidable as that which faced one-color portrayal. This adversary will be *high quality full color lithography*. Lithography produced, if you will, at quality levels which will be the highest in our history.

Quality is like the weather . . . everybody talks about it, but few do anything about it. Those of us who attempt to control quality sometimes feel it would be easier to control the weather.

When some lithographers say that they have quality . . . that their business was built on quality . . . it makes about as much sense as an advertiser who advertises that he has weather. The question is, What Kind of Weather? Every lithographer has quality, but what kind of quality? Cheap, average, or superior?

What Is Quality?

Recently, I read a definition of quality control for industry as follows:

"A means of manufacturing, to a consistent standard, the lowest quality product which the public will accept."

Perhaps you will agree with me that examination of this definition will reveal that he who subscribes to this theory actually gears himself and his organization to the mass production of mediocre goods and services. At best, it would mean the production of products not above the quality levels established by his, frequently, not too discriminating patrons.

In my opinion, this is a very dangerous concept. If we produce no higher quality lithography than our clients demand, do we not relegate ourselves to our capabilities of yesterday? Vast sums of money and endless man hours of toil are being expended in research to provide new horizons, to provide the ways and means for each of us to achieve new and higher quality levels for ourselves and for the industry! If we fail to make our contribution to research too and exploit its results, we indeed place ourselves and our industry in a precarious position with respect to the utilitarian aspects of our profession.

A definition of quality which I like goes as follows:

From a talk presented at the NAPL convention, Hotel Muehlebach, Nov. 20, 1959.

"Quality is never an accident; it is always the result of high intention, sincere effort, intelligent direction and skillful execution; it represents a wise choice from many alternatives, the cumulative experience of many masters of craftsmanship. Quality also marks the search for an ideal after the necessity has been satisfied and mere usefulness achieved."

The author of this definition is Will A. Foster. However, our first introduction to the interpretation was through Ken West, Hallmark Cards, when it appeared in one of his publications recently.

This definition of quality, in our opinion, is the true meaning of the word.

What do you think of a control plan based on this concept of quality? Would you consider it a sort of pie-in-the-sky dream? I think not; for you know, deep down in your sense of values, what quality control means. It means hard work, vigilant attention to details, and dedicated effort that is worthy of the word in its fullest meaning. It means the setting up of controls and it demands the real use of them.

'Color Under Control'

I would like to describe the quality control plan which has been used in our plant. It is an indispensable tool in our effort to manufacture to a consistent standard, the highest quality product of color lithography. We call it "Color under Control." The theories upon which the concept of this system are grounded have long since been proved sound in our own laboratory. From the doctrines established in our many years of research, and from the practical application of the lessons we have learned, there has evolved an effective and reliable system of quality control.

In developing this "Color under Control" procedure, and after having practiced its use for many years, we feel that we have learned a few things and would like to pass some of our findings on to you in the hope that they will be helpful.

Probably the most important finding was the startling discovery that, apparently, a simple thing like tone was not clearly defined in our vocabulary: much less, the more complicated matter of color value. From the first. we discovered our quality control team had difficulty in understanding one another with respect to this important term. Tone values were described in the conventional terms of percentages, such as 10 percent, 20 percent, 30 percent, etc. It was evident that a 40 percent tone to one man meant a certain dot size, but to another man, meant a different dot size. There was a great difference of opinion in tonal evaluation. We immediately recognized that our line of communications was inade-

When discussing tone values and dot sizes, it became crystal clear that we needed to establish a common denominator. We needed to know exactly what was meant in a reference to any given tone value. It was obvious that our nomenclature was inadequate, and that our system needed language which would serve with clarity and precision; a language that could be understood by every member of our organization. It was decided then and there to establish a definite yardstick or common denominator.

For this, we turned to a very simple, and almost too obvious, proven photographic test procedure. Every cameraman knows that it is the rule of thumb that one-half again more exposure will provide a uniform and logically perceptible tone difference in the result. This is true regardless of the degree of intensity of any given tone value. For example, when the photographer exposes and develops a given tone, he knows that if he exposes that tone 50 percent more, the result will be an increased tone value by a given amount. Likewise, if he takes the next tone value and again increases his exposure 50 percent, he will gain a tone value in this third exposure that is as equal in difference from tone No. 2 as tone No. 2 was from tone No. 1.

Thus, it was only natural to adopt this time-tested method of photographic procedure as a basis in establishing our *common denominator*.

The practice is common, among amateurs, of determining the correct

exposure for a photographic print by stepping off given areas; each providing 50 percent more exposure than the previous step. This, of course, is in the area of continuous tone photography.

Set Up Tone Scale

It was then quite logical to apply this basic principle to the creation of our yardstick. We set up a tone value scale by stepping off a series of exposures on high contrast material and exposing these through a halftone screen. Thus, we ended up with a halftone step wedge in which each step had received 50 percent more exposure than the adjacent step below it. We established 15 steps, or tone values, ranging from a pin dot to a solid. This was half again as many steps as is commonly used in the percentage system where the range is broken down into only 10 steps. It was now apparent that we would have, not only a more readily understandable set of values for our common denominator, but also an even more accurate system of con-

To further simplify our plan, we gave the tone values a number from 1 through 15. Now, we had on film, dot sizes with numbers and each number had a given density reading. For example, when one of the members of the team would refer to a No. 5 dot size, every other member of the team would know that he meant a dot size on film that would read .28 on a transmission densitometer. Accordingly. when he referred to a No. 8 dot size, he was talking about a dot size that would read .56 on the transmission densitometer. Thus was established a common denominator with reference to halftone dot values on film, Yet, we realized that we had come only part way. We needed to know what these dot values or these steps would look like when printed by an offset press on paper.

The halftone dot scale was next lithographed in black ink on a specific paper stock. The solid black color bar was then checked on a reflection densitometer to a pre-established ink film density strength. It was thus possible to see what the No. 5 dot looked like when lithographed on paper. We then

took a reflection densitometer reading of this tone value and established it as a norm for a given paper stock. The densitometer reading revealed that a No. 5 dot size on coated paper should read .24. Therefore, a No. 5 dot meant to everyone concerned, a dot size that when printed on that paper, would give a reflection densitometer reading of .24.

We have been discussing only one color-black ink-on paper. To read color, we used the appropriate filter on the reflection densitometer. It was, of course, imperative that the ink strength on each solid color bar of the three process colors (yellow, magenta, cvan) be so balanced that an identical densitometer reading on the No. 5 step of each color could be obtained. For instance, the No. 5 dot printed in vellow ink and read on the reflection densitometer through the C5 (blue) filter would read .24. Likewise, a No. 5 dot printed in magenta ink and read through the B-58 (green) filter would read .24, and the cyan No. 5 dot, when read through the A25 (red) filter would also read .24. Therefore, a No. 5 dot on a specific paper stock, regardless of ink color will, when read through the proper filter, give a reflection reading of .24. Likewise, the No. 8 step will read .50 when read through the various filters.

Having established this common denominator, we then were assured of knowing not only what we ourselves were talking about, but were assured of complete understanding when discussing a dot size or tone value with one of the other members of our controls team. Now, when the dot etcher told the cameraman he wanted a No. 5 dot in a given area, the photographer knew exactly what he was talking about and knew how to get it for him. The stripper knew what he was talking about, and so did the platemaker and the pressman. It provided a line of communication that would not break down on its trip through the plant from one department to the other.

Result in Combination

Having established these tone values individually for the various process



J. Tom Morgan, Jr.

colors, we needed to know the result of these tone values in combination. We therefore prepared a color chart, based on our common denominator principle. By examining the chart, we can determine that a No. 5 yellow dot, plus a No. 5 magenta dot, plus a No. 5 cyan dot will give us a predicted color value on a specific paper stock. It was a happy solution, not only for the production team, but also for the sales staff and, in turn, for our customers. The client can choose a color from the chart that will suit his requirement and we know exactly what he is talking about. We know exactly how to go about getting that color for

Of course it was necessary to run these charts on various paper stocks. The densitometer reading of a No. 5 dot lithographed on uncoated paper is different from that on coated stock and again different on a cast-coated sheet.

It is required that, when speaking of a tone value or a color value, we speak in terms of the paper stock to be used in the production. Once we know the stock that will be used, we can set about the business of charting our original color copy in a breakdown of tone values that is meaningful in the language of our color control team. Its dependability as a tool in achieving the desired results in accordance with a pre-determined plan cannot be over emphasized.

Because of our experience with the practical application of this chart, and the time-proved laws of photography upon which it is founded, may I urge you to prepare for yourselves such a

chart. It must be comprised of meaningful, dependable tone values and based upon the common denominator principle which has been discussed here at such length. All members of your team must understand and have faith in your chart and even more important, they must use it!

Let me say again, that unreserved and complete dedication to this concept has been a vital factor in our approach to the control of color and its faithful reproduction by offset lithoggraphy.

Five Danger Areas

With the completion of calibrated color charts, your big job will have been done. You then will have a vehicle in which to travel safely down the road of variables. On this road of variables, you will encounter obstacles. You will need to build bridges over what can be termed as five chasms, or five danger areas. Five areas that will run wild if a means is not found to harness and control them! These five areas are:

- 1. Copy
- 2. Camera
- 3. Dot Etching
- 4. Platemaking
- 5. Press.

Let's start at the beginning and describe briefly how the use of this common denominator can further help establish quality control for you. The first of the five control areas is:

1. Copy Control: It would take volumes to cover this one. Your main interest is to recognize that the client almost always controls the copy. It is up to you to help him prepare good color copy. It is essentially a job of education. Refuse a job if the copy is not up to your requirements. Do not accept a job where the copy is unworthy. Work with the photographer, the artist! Get into the preparation of a job at the beginning.

Once the approved color copy is accepted and entered into the production plan, quality control goes into action. The copy is first charted by use of the color charts, and given areas are appraised. The proper control numbers from the color chart are designated.

(Continued on Page 108)



Moving force behind JLEC: (I.-r.) Nelson P. Mitchell, Lynn R. Wickland, Edgar Walker, A. L. Weisenburger, Fred A. Fowler, David H. Scull, Bernard P. Voith and Ralph C. Williams. (See story for company affiliations.)

Washington Litho Committee <u>Does Something</u> about Education

By Mike Geary
Washington Correspondent

WITH all due respect to the many fine "old school" hand-craftsmen in the various trades, there are few in litho management who fail to recognize the fact that modern methods must be adopted if they are to compete in the pace of today's modern business. Automation, electronics and quality control may be words that the old school may still be suspicious of. Many of these oldtimers, however are learning that they may still apply their skill and knowledge in connection with modern machines and methods and turn out an even better product.

Even if you equip your plant with the latest machines and materials available it will operate efficiently only in direct ratio to the efficiency of the personnel who tend the machines, supervise the operations or meet the public. A training program for the apprentice boy is no longer the only educational plan required of the front-running business. To keep abreast in industry today, business at all levels is tightening up its belt and demanding more from supervisory personnel, salesmen and

others. Investors who hold executive positions are learning the advantage of having a working knowledge of what is being done with their investment dollars. Executives who are mechanics themselves are taking refresher courses in their trades in order to keep up to date. Salesmen are reminded how to sell and office help are taught how to answer the telephone.

This may sound a bit exaggerated, but leading researchers will prove it's being done and must continue.

Why all this sudden dash for education? This race to install quality control? Teach salesmen?

Sometimes it starts when old established customers walk out of your place of business with no better excuse than "we wanted to make a change." You learn later that your competitor has given them a better package. Somewhere along the line, your competitor has picked up the modern touch. He's become educated.

Where Do You Begin.

Where do you begin? Well, you've probably already been subjected to

a great deal of general product education. It's rubbed off on you and you don't know it.

General product education is furnished by the manufacturer and wholesaler who see to it that instructional material and product demonstrations are presented to the customer. This is a better than fair introduction to a product, if the salesman is equipped to present a convincing demonstration and follow-up; for too often company technical representatives have little time to nursemaid a new product in a small shop. If the salesman's demonstration is a bust, it's probably because of lack of education. Education in his product. Salesmen who sell plates should be able to tell you if it will dry on the rollers while you're out to lunch. Sometimes it doesn't work out that

Some general product education is furnished in today's advertising, particularly that appearing in trade journals. You can absorb this type of education without moving out from behind your desk; but when this education period is completed, you're doing the buying, not the selling.

What you need now is specific product education. Something to bring back that customer who "wanted to make a change." Step by step through the shop, find out where you fall short of your competitor and rectify the situation by some specific education.

In addition to recognized technical schools for the trade, crash programs are conducted in specific education through varied media of communication, including closed circuit television, short term seminars conducted by trade associations, and panel discussions at conventions and trade meetings. Find out what education you need. Find out what is available to you in your locality by contacting local or national industry groups.

Educate your salespeople, but don't forget the men back in the shop. If they aren't able to ship a good clean article up front, you won't be able to sell it.

Group Formed in Washington

It is a continuing policy at ML to report graphic arts educational programs to the trade. One of the most progressive educational programs by a local group is the one organized by the Joint Lithographic Education Council of Metropolitan Washington, D. C.

JLEC is the brainchild of a few forward-thinking Washington lithographers who felt that somewhere between the shuffle of ratio charts in the front office and cocktails at mutual-admiration trade gatherings, the man in the back of the shop was getting the short end of the stick. He needed additional education in his job, the employers were not furnishing it and there was no source available in the city.

Selling this philosophy to the trade was by no means an easy task, but when JLEC showed that it had no axe to grind other than to educate the craft, the industry responded whole-heartedly. The results to date have been quite gratifying.

One of the original group of JLEC planners (later chosen as chairman) is Frederick A. Fowler, U. S. Coast and Geodetic Survey, past president of the Washington Litho Club and president of the National Association of Litho Clubs. Mr. Fowler produced figures that indicate a need for upwards of 150 new pressmen and 100 cameramen each year, for replacement and expected expansion in the Washington area.

Sharing Mr. Fowler's views and joining with him to form the initial Council membership, were David H. Scull, Turnpike Press; Bernard P. Voith, president, Local No. 13, ALA; Lynn R. Wickland, chief, graphic arts department, Army Map Service; and Ralph C. Williams, Federal Lithographic Co., representing the nonunion shops. Later these men were joined by Nelson P. Mitchell, McArdle Printing Co., representing Printing Industry of Washington, D. C., A. L. Weisenburger, president and business agent, International Printing Pressman and Assistants Union; and Edgar Walker, E. H. Walker Supply Co., president of the Printers and

Supplymens Guild. Mr. Fowler represents the Washington Litho Club on the Council.

Goal of Council

The goal of the Council was to set up a school for apprentice and advanced lithographic education of employes of government and commercial shops, with emphasis on lithography.

To initiate the program, the Council put together a course last spring labeled "Survey of Lithography"; 16 three-hour sessions, one each week. Robert J. Lefebvre, U. S. State Service, was chief instructor for the course. Other guest instructors volunteered their services, including Charles Shapiro, LTF; Albert Materazzi, Litho Chemical & Supply Co.; Paul Schafer, Harris-Intertype; James Austin, S. D. Warren; Raymond Geegh, GPO; and Raymond Blattenberger, Public Printer.

The Council presented this package to John Holden, director, Graduate School, Department of Agriculture and requested that the school consider a course for apprentice training in lithography, with classes to begin with the February 1959 term. (Founded in 1921, The Graduate School provides opportunities for Federal and other employes to continue their education. It offers an after-hours program of some 350 courses. The Graduate School does not give degrees, but its work is recognized by the U.S. Civil Service Commission and many colleges and universities accept its credits.)

The Graduate School granted the Council's request and offered class-room space and assistance in procurement of text books. The Washington Litho Club purchased LTF Audio Visuals as needed for the course and they were loaned to the School. JLEC was in business.

Mr. Fowler then submitted his first flyer to the trade, explaining the course and requesting financial assistance and student interest. The Initial solicitation and personal contact follow-up netted contributions from 31 local litho firms, 19 of which signified a desire to furnish students,

Course Gets Under Way

From nearly 100 initial applicants, 32 were selected, representing six government agencies (eight students) and 18 commercial plants (24 students). Sixty students were deferred until later classes in order to include some representation from all interested concerns and to insure personal guidance to all students with the teaching staff available. The course got under way as scheduled.

The public printer congratulated the Council on its program and noted that 53 employes of the Government Printing Office had expressed a desire to attend. "It is my opinion that the Council is rendering a very real service in providing these educational facilities for lithographic trainees and apprentices in this area, and I want to commend your organization for arranging this course," Mr. Blattenberger declared. "I am sure the lithographic industry will profit in the long run from this program, and the employes themselves will find it worth their time and expense in preparing themselves for better jobs later on."

The Council next won support from the Graphic Arts Association of Washington, D. C. (now Printing Industry of Washington). Nelson P. Mitchell was appointed to the Council to represent PIW. (Incidentally, PIW also conducts annual classes of instruction in the graphic arts, with emphasis on management, sales and production planning.)

With this added support, the Council announced that future courses in presswork, stripping, photography, litho chemistry and a repeat of "Survey of Lithography," would be forthcoming.

Classes Expanded

To get the expanded September classes under way, various government agencies offered temporary space to the Council, which is working on plans to locate a permanent, fully equipped, meeting site. Courses being conducted in the '59-'60 school term include the following:

1. Survey of Lithography
Instructor: Robert J. Lefebvre
(Continued on Page 113)

THROUGH the GLASS

WALTER SODERSTROM graciously provided his NAPL convention suite for use by National Association of Litho Club officers, who discussed at length, the biggest problem now facing NALC: how to obtain the services of a paid executive secretary and a permanent mailing address without wrecking the organization's modest budget. Several excellent ideas were forthcoming. They will be taken up at great length next Jan. 22 and 23, at the NALC's mid-winter Council of Administration meeting.

The NAPL executive vice president continued his annual custom of giving an old-timer's dinner at the NAPL convention. The fine appointments of the Carriage Club, and the equally fine food assured a pleasant evening of reminiscing about the early days of the association.

Novel booth ideas at the show included a small gauge model railroad in operation at the Roberts & Porter display. Gimmick was to guess how many miles R & P staff members traveled last year in serving their accounts. H. S. Tasker, president of Ilford, Inc., came closest and won the trains, which he promptly donated to a boys' club.

A handy plastic Opacity Gauge was the premium at the Oxford Paper Co. booth. On the back is an equivalent weights table, covering various types of paper in reams of 500 sheets.

One conventioneer made quite a hit with room service by requesting, nay, demanding, six packages of Mail Pouch chewing tobacco and a big supply of Copenhagen snuff. He was startled when a bell boy delivered the goods, exactly as ordered, and at 2 a.m. Furthermore, the boy knew where he could get some more, in case the provisions weren't sizable enough to last until morning!

For printers everywhere this is always a world full of woe and if it isn't one thing it's another. Consider the case of the Chicago printer who on getting down to the office one morning, discovered that the ice cream in the vending machine used by the employes had turned from the solid to the liquid state over night. Seems there had been a power failure while the city slept. The ice cream had melted, oozed through the delivery chute and was being tracked all over the place. The vending company's service man, who came a-running, said it took him an hour and a half just to clean the soupy mess out of the machine. Relating the incident at a "Trouble Clinic" during the National Automatic Merchandising Association's recent Chicago convention, this man managed to find great satisfaction in the fact that trouble like that doesn't happen often. He did not reveal the name of the printer.

Men's tie and hose sets packaged as colorfully lithographed studio greeting cards, a rather unusual merchandising approach, have been put on the market in time for the Christmas season by Fashion Neckwear Co. Inc., of Boston.

The new package is dressed up with Christmas greeting card designs. It displays merchandise on its inside fold in pilfer-proof latex blisters. The purchaser simply fills in the name of the recipient and donor and slips the gift into a mailing envelope, supplied with the merchandise, the company explained.

Yule offerings in the new package, in the \$1.98-\$2.50 range. Packages measure $47/8 \times 13''$ folded size. They a tie-and-sock combination, retailing in the \$1.98-\$2.50 range. Package measures $47/8 \times 13''$ folded size. They were produced by Diamond Gardner Corp.'s subsidiary, Gardner-Brooks, Inc., Springfield, Mass.



How To Standardize Your 3-Color Operation

By Warren L. Rhodes
Head, Graphic Arts Research Department
Rochester Institute of Technology

A CTUALLY, I am not aware that there is any specific short-run color system. From what I have seen of plants that are grappling with the problem of short runs of process color, there must be as many systems as there are plants.

I can see that color process printing involving short runs is a special problem. When the cost of plate preparation becomes large in comparison to the total cost of the printing order, a great deal of attention must be paid to reducing guesswork in separations, halftones and plates. When the press run is large, you can sometimes hide the cost of prepress operations in the total cost of the job and blunder along until the plates are satisfactory.

Ideally, in short run color jobs, you would like to shoot the separations, make the halftones and plates, and go to press with the run, with no make-overs, no dot-etching and no proving. It is in these operations that profits can be made or lost in short runs. In stating the problem so simply, however, I overlook one important aspect which can also make or break the job-press makeready: If the halftones are not right, and compensation must be attempted on the press; or if, because of troubles, a lot of paper and time is used to get started, then press time and waste can quickly eat away at the markup.

The way to get at these problems is through standardization and control of production methods. It may not be possible to reach the goal, but I hope to show you some methods whereby this utopia may be approached.

To do this I should like to start at the press and work backwards. If we can standardize the press operation and by some means make sure that our plates will produce satisfactory results, then we will have eliminated one of the big sources of lost profits—waste time and paper at the press.

Standardization, carried to the ultimate, means standardization of the press adjustments, fountain solution, inks and paper. This standardization, combined with control of the amount of ink which is transferred to the sheet and the sharpness of the print, should make it possible to obtain consistent results day after day. Although it is seldom possible to achieve this degree of standardization, the closer it can be approached, the more ideal the production situation becomes.

Standardizing the Press Operation

Whether or not you are doing three-color process, you will find it advantageous to use the inks developed for three-color printing. These inks have many desirable characteristics for short-run printing. One of the advantages is that simple masking may be used with these inks, and another advantage is that a gray scale can be produced approximately gray with equal-dot halftones. I mean by this that if the ink amounts on

the print are properly chosen, the combination of 50 percent yellow plus 50 percent magenta plus 50 percent cyan will produce a gray. Any other combination of dots of equal percentage will also produce a gray, for example, 25 percent yellow plus 25 percent magenta plus 25 percent cyan.

This is not strictly true, but is near enough for practical purposes. Other process inks may not perform as well in this respect, and as you will see later in the discussion, this can lead to some difficulties.

In order for a color reproduction system to work its best without a maximum of handwork and difficulty, the grays of the original must be reproduced approximately gray with the three colorants. This is a prime requirement of a positive and dependable system. Achieving this is not always easy. By a systematic approach, however, this requirement can be met with a minimum of difficulty.

During a program of setting up standards and controls, equal-dot halftones should be stripped onto the color plates of every job. Control bars or dots consisting of solids and 70 percent tints should also be included on the flat. They should be located on the sheet so that they can be trimmed off and discarded. Equal-dot scales can be made by making three halftones of a gray scale without filters. These three halftones should be identical except for the difference in screen angles.

When the press is adjusted to produce the best print of the subject,

From a talk presented at the Eastman Kodak color seminar, New York, Oct. 20-23.

this scale will come out gray if the separations have been made correctly. If the printed scale is not gray (and it won't be on the first test) then some press adjustments will be required before the standards for ink film thickness can be established. When the production run is completed, some additional sheets should be printed and the press adjusted so that the scale is as nearly gray as possible. When this is accomplished, the wet cvan control bars should be read with a densitometer, and simple sheets should be pulled from the delivery and set aside for future use. This procedure can be repeated as many times as you desire.

It is possible that none of the prints produced by this routine will be neutral. Before a good gray can be achieved, the right amounts of cyan, magenta and yellow must be printed. Since only the cyan is adjusted in the first part of the program, you would be lucky if the magenta and yellow combination happened to be just right in one of the tests. Because of this, it may be necessary to conduct a special run to determine the amounts the three inks require to produce gray. In this test the yellow should be run fairly light, the magenta slightly heavier and the cyan as high as possible consistent with practical printing considerations.

When a good gray scale is finally achieved (it's not as easy as it sounds), the control bars are measured with a densitometer. These values are the standard ink values which you will use in setting up the press on all press runs in the future. At the RIT research department, we have standardized on: yellow 1.05; magenta 1.15; and cyan 1.30. There are dry densities measured on a Welch Densichron, using the red filter for the cyan, the green filter for the magenta, and the dark blue filter for the yellow.

Of course these are densities of the dry ink solids. The wet ink will probably measure differently. In order to find out what the wet density values should be to measure correctly when dry, it is necessary to measure sev-

eral prints which have just been printed, set them aside and measure them again when they have dried. The sheets should dry at least 24 hours.

If you do not use a densitometer to measure the ink, then the job of control is somewhat tougher, but still not hopeless. In the test when gray is finally achieved, several sample sheets are set aside until they are dry. The control bars (or circles) are then cut from the sheet, trimming as close to the bars as possible. Cutting a slice off the edge of each wouldn't hurt. Control is achieved during press runs by visually comparing these standard bars with freshly printed sheets. Remember that the color changes as the ink dries, so what is wanted is not a match. Judgment must be used so that the change can be anticipated. Only after considerable experience will you or your pressman feel comfortable with these methods of control, but eventually both of you will come to have faith in the results of a press run which is controlled.

Sharpness of Print

A factor which I did not mention, but which is important in press control, is the sharpness of the press print. You have observed that sometimes the press will give a very sharp print while other times fill-in and slur can cause a lot of difficulty. One thing to remember is that some fill-in always occurs - especially in the cyan when it is printed at the high densities required to produce neutrals. In controlling the sharpness, then, you are not trying to get the sharpest possible print every time, but you are trying to get the sharpness consistent. If the print is equally unsharp from press run to press run, then you can anticipate the results.

One of the main causes of unsharpness is a change in temperature and humidity in the pressroom. If at all possible, the room should be air-conditioned. This is more important in short runs than in long runs. I am sure that the expense involved will be more than repaid in reduced press makeready and in lowering the number of reruns.

There are several ways to check sharpness. One of the best is to measure the density of the tints in the control bars and compare them with the density of the solids. I use the ratio of the solid to the tint. (Solid/Tint) When this number approaches 1.0 I know that the print is filling in, and when the number gets larger (1.4) I know that the print is sharp. Sharpness, like density, can be checked visually.

I repeat, I do not try to get the best possible sharpness, but instead to get the same sharpness from run to run, week to week, and month to month.

Plates

Some lithographers try to compensate for a slightly full negative by increasing plate exposure. Sometimes other processing methods will be varied to give improved results. Compensation of this kind, involving personal judgment, can cause untold troubles in a standardized operation. You can't beat the ultimate in quality that a skilled operator can get when he uses judgment in making plates, but you must remember that to get the best plate by complicated variations takes time. Frequently, too, the skilled operator will make a plate over to get the last ounce of quality.

In short-run color you must sell a mass produced item rather than a custom job. Like suits and automobiles, the custom job is best, but the price is high. Therefore, for economic operation, platemaking (as well as presswork) must be standardized and controlled. Once the best average chemicals and operating procedure for platemaking have been found, nothing should be varied in the process. It is a good idea to use an LTF Sensitivity Guide, and if possible a halftone test object with a 5 percent and 95 percent 150-line tint. If these are held and the sensitivity guide is always exposed to the same step, then you can be fairly sure that the platemaking has been controlled.

Ink and Paper

In order for the program to be completely successful, everything in the line of production should be standardized. This includes ink and paper. Of course you cannot always use the same paper, but a routine can be worked out for every type of ink and paper you expect to use. The number of kinds of paper and ink you stock and use can be kept to a minimum. On short runs your customer can often afford to spend a little more money for paper. Your salesman should always try to get him to use a type of stock for which you have worked out a standard procedure.

Paper, as it comes from the mill, is not always consistent. Occasionally the printing properties will be very different from shipment to shipment. Ideally, you should buy paper in large quantities, and send a representative sample of the shipment to a testing laboratory. Each shipment should be checked in this way to make sure that the paper quality is the same from time to time. Taking this precaution can materially reduce the variability caused by paper.

Ink quality and color can vary from one batch to another, too, Although ink is a little easier to test than paper, it is difficult to be sure that it is consistent in color and in printing properties. The color of the ink you receive can be checked either visually or with a densitometer. Although a drawdown is usually satisfactory for checking the color match, a press print is much surer. Care must be taken in printing to make sure that the ink film thickness of the sample is the same as the standard. When using a densitometer, this can be achieved by measuring the sample with the complementary filter to make sure that it measures the same as the standard.

The Preucil method can be used for checking the uniformity of ink shipments. Colored patches of the process colors are measured with red, green and blue filters. The "hue" of the ink is determined by performing the following operations on the values obtained:

$$\begin{aligned} \text{Hue Error} &= \frac{\mathbf{M} - \mathbf{L}}{\mathbf{H} - \mathbf{L}} \\ \text{Grayness} &= \overline{\mathbf{H}} \end{aligned}$$

H is the highest density value ob-

M is the intermediate density

L is the lowest density

Although this method is not as accurate as it should be, it will help you to keep one of the important variables from causing too much difficulty. (Further information on this method can be found in the LTF booklet No. 320, "The LTF Color Chart" by Jack W. White.)

More precise and accurate color determinations may be obtained by the use of colorimetric methods. Some of the color-difference meters, such as the Hunter or Colormaster, can be used to obtain values quickly and easily. Spectrophotometers, which are considered the basic instruments, are more cumbersome and expensive. Several companies provide spectrophotometric and colorimetric service on a one-day basis. If ink is purchased far enough in advance, then you could make good use of these services.

Separations and Halftones

Standardizing on the paper, ink, platemaking and presswork places a heavy responsibility on the halftones. This is as it should be. You need to know that the halftones will produce the results you want before making plates and going to press. This may be done by abridged proving methods, or by actual press proving. Both are expensive and time consuming, and they should be eliminated if possible. Many reflection copy originals could be handled without proving if the system were well enough worked out. I expect, however, that it will be a long time before any of us will have the confidence to go to press regularly without some kind of proving.

Judging Transparencies

Reproductions from transparencies are a gamble. Judging the original in terms of how it will look as a reproduction is a task which even the most expert find very difficult. While you lithographers wait for us scientists to catch up on our understanding of the psychological factors involved in reproducing color gransparencies, it will be necessary to find

out how good the halftones are before going to the production press.

In spite of the difficulty, Eastman Kodak has proved that a large number of good color transparencies can be reproduced entirely satisfactorily in a standardized color reproduction system. It is possible to set up a procedure for reproducing transparencies which will be good enough for most of the high quality originals which you receive. Unfortunately, most of us get a lot of not-so-good transparencies, and frequently we get customers who want to make major modifications of the original. No system as yet can be devised to handle these situations.

The average good transparency, however, can be handled successfully in your standardized system. Often single masking or simple double masking will be sufficient for color correction. Blemishes or slight imperfections must be taken care of by hand correction or dot etching, but this can be kept to a minimum if a good routine for masking and separation is established and followed.

One of the most important considerations in reproducing color originals, including transparencies, is that it is necessary for the grays in the original to reproduce approximately gray with the three process colors. Since you have arranged for equal-dot halftones to reproduce gray by plate and press controls, then it should be easy to find out if the gravs in the original will come out neutral. Select various tones of gray in the original and examine the halftones to see if the dot sizes are equal. If not, the separations or halftones should be made over.

Include Step Wedge

A simple way to insure that the halftones will produce grays is to include a gray step wedge with the transparency when the separations are made. This wedge should be made on the color film you are using in the process. Exposure and development should be adjusted so that densities of the separations and halftones are equal in all steps of the gray scale. When this is achieved,

(Continued on Page 112)

Offset papers of the

Past, Present and Future

By Ronald I. Drake
The Champion Paper and Fibre Co.

THE history of offset printing papers is the history of a mad scramble on the part of the papermakers in their endeavors to keep up with the constantly accelerating developments of the lithographic industry. The interesting thing about this is that the beginning of this development was not so long ago.

Theodore Regensteiner, in his book My First Seventy-Five Years, says that prior to 1912 offset lithography was very much in the experimental stage and that what commercial work was done was black only. Actually most of this early work was letterheads, invoices, ledger pages, etc., formerly produced by direct stone lithography. As the halftone process improved, it was applied to offset lithography and for the first time advertising pieces produced by the offset lithographic process started to appear.

The papers used for this early work were adaptations of the then existing uncoated letterpress papers which were modified, as time went on, by increasing the size test of the paper. For a long time, the early offset papers were merely hardsized book papers. Gradually the paper industry adapted the principle of tubsizing to the manufacture of book papers for offset and tubsized offset book in wove, vellum, or antique finish was all that was available.

First Color Reproductions

Some time between 1912 and 1915, the first color reproductions by offset lithography appeared on the market. Again, Mr. Regensteiner points out that early attempts along this line con-



Ronald I. Drake

sisted of printing a black key halftone plate by letterpress and pulling several key sheets from the black letterpress form in purple ink. These key sheets were transferred to zinc plates which were then hand-staged for the color forms.

The paper used for these first color reproductions was an uncoated offset book, and although considered marvelous color work for the time, it was a far cry from today's beautiful color work.

For many years after this date, the development of color work consisted of adding more and more plates to the job until as late as 1926 we had color reproductions lithographed with as many as 17 color plates. Through all of this period, the only sheet available to the lithographer was the standard uncoated sheet in regular finishes, to which was added in the later years various embossed patterns of which linen was the most popular.

By the early 1930's, the pressure on the paper manufacturer to produce coated papers for offset printing had reached the explosion point and something had to be done about it. Peculiarly, it was the label industry which forced a break-through by demanding a coated one-side sheet suitable for offset printing. Even though there had been some use of coated one-side in stone lithography, when this event occurred the race was on, for the offset printer found himself for the first time really able to compete with the letterpress printer from the quality standpoint and able to offer the customer some real savings.

Coated Two-Side Sheets

It was not long thereafter that the demand for coated two-side offset enamels forced the mills into extensive experiments and trials in an endeavor to produce such a sheet. While there are many such sheets on the market today, it is questionable whether they are all that they should be. In the first place, it is doubtful whether as papermakers we know all we should know about what makes the offset process perform as well as it does. There is plenty of evidence that the lithographic industry does not know either. While much research is being done by various technical organizations including paper manufacturers, the mystery of why one lithographer can run a given sheet successfully and his neighbor cannot, still remains to be solved.

In any event, the middle '30's marked a turning point in the offset printing industry. The first coated two-side enamels appeared on the market and in spite of a lot of headaches for the papermaker as well as the lithographer, gradually gained greater and greater market acceptance. Problems of ink receptivity, moisture resistance and picking were gradually overcome. The

From a talk presented at the NAPL convention, Hotel Muehlebach, Nov. 18, 1959.

word "gradually" is used deliberately because as fast as the papermaker would develop a sheet for a current set of press conditions, those conditions would be changed by increased press speeds, more glossy inks, larger press sizes, lighter weight papers, and so on.

While all this scramble was going on to produce these coated offset papers by the conventional coating methods then available to the paper industry, the development of machine coated papers for roll-fed letterpress was also taking place. By the late '30's and early '40's, such sheets were a normal part of the lines of most paper manufacturers. Their use, however, was not confined solely to roll-fed equipment but was adopted quickly for sheet-fed work. These papers gave the letterpress printer a big price advantage over the lithographer.

It was only natural then for the offset printer to start the headaches all over again through his insistence on a machine-coated offset enamel which would place him in a more competitive position with the letterpress printer.

There is no need here to recite all the development work that went on. By early 1950 such papers in several grades were available to the lithographer. Also during this period there occurred a significant shift in the manufacture of coated papers more and more away from the old type conventional coaters and toward the machine coating method, either on the paper machine itself or by any one of the several high speed air-brush, roll, or blade coating methods.

So it is that today nearly all coated enamels and especially coated offset enamels are produced on the paper machine. There are many advantages of this method involving physical characteristics, but the most important one of all is cost. Without the development of the machine coating method of producing these papers, the cost of these grades would be prohibitive today.

Methods of Production

There are nearly as many methods of producing machine coated papers as there are paper manufacturers producing them, but in general they comprise some form of roll coater applying coating to one or both sides of the

New NAPL Bulletin



Front cover of handsome new bulletin on "Papers for the Lithographer," prepared by Mr. Drake in collaboration with the NAPL bulletin committee, headed by J. Tom Morgan, Jr.

basic raw stock in one or more stages. Or the method may consist of one or more roll coaters followed by a trailing blade coater. In lightweight papers of certain classes, sometimes either a roll or trailing blade alone is adequate. In any event, the situation today is one in which coated paper is almost a must; if not coated, then of the pigmented type which actually is a form of on-the-machine coating.

What now of the future? There are two major problems facing the paper-maker. First, to further modify and improve current coated offset enamels while endeavoring to hold the line on cost, and second, to develop coated offset papers for the fastest growing development in the graphic arts of all times: web-offset.

In the beginning the story was that just any old paper would run on these presses. That idea has been pretty well exploded by now and both lithographers and papermakers generally, are recognizing that something more than just the regular run of letterpress enamels is necessary to assure successful and profitable operation of these presses.

Experience so far with these presses indicates that there is a very definite difference between the presses themselves in their ability to handle certain types of papers satisfactorily, but more important than the press itself is the class of help being selected to operate such equipment. Time after time, we hear that the men operating such equipment were formerly letterpress operators, that their training on this offset press consisted of helping the erector set it up and two or three weeks at the most under the instructormechanic. This appears to be the standard training for a lithographic process that is fundamentally difficult to make operate properly in itself, but whose problems are multiplied many times over by a press that is four to eight times faster than the usual sheet-fed presses. However, there must be merit in these presses for their rate of installation is simply amazing. It is to be hoped that there is sufficient work to keep them all profitably busy.

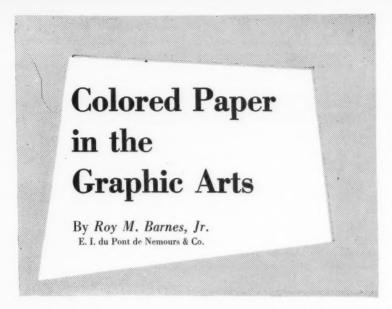
The impact of these presses on the paper mills has been twofold: (1) To solve the problem of the best paper for this new printing method, and (2) To install sufficient roll-winding equipment fast enough to meet its demands. The solution to the first problem will come at a much slower rate as information on printing requirements is fed back slowly through the research and development laboratories and finally to manufacturing.

Web Prospects Good

In any event, as we see the picture today, there will be more and more web-offset presses installed as time goes on. That they will take a larger percentage of their business from a sheetfed equipment is unquestionable. They will secure some of their business from the letterpress printer. Their economy of operation, plus the fact that there will be a continuing spread between the cost of sheet paper and roll paper, all indicate a bright future for this method of printing. All it will require is a little time and experience and the quality will be such that this method of printing will be knocking on the same customer's door with the same quality as is now done by the sheet-fed printer.

The mills will have papers available as that time comes along. They will be on-the-machine coated, produced at high speeds, using new techniques and new materials.

Frankly, I look forward to the golden age of printing over the next 10 years.★



COLOR has been used widely to expand markets for automobiles, textiles, soap, photographic supplies, television and many other things, so it is reasonable to question whether consumers also want more colored paper. Several years ago our company asked the major consumers of fine and printing papers about their attitudes on the subject.

Through preliminary discussions with paper mill marketing executives, paper merchants, advertising executives and others it was learned that the major influence in the selection and purchase of fine papers rests with:

- 1. Commercial printers,
- 2. Advertising agency art directors, and
- 3. Commercial artists and layout men. (To a lesser extent with clients of these three groups.)

For the purpose of the survey only these three groups were interviewed. Since the survey showed that art directors and commercial artists and layout men think very similarly, the survey results have been broken down into only two parts; the attitudes of printers and the attitudes of graphic artists.

The survey, made on a national scale in 35 cities selected on a probability sample basis, was conducted by an independent consumer research company, National Analysts, Inc., of Philadelphia. The results have been tabulated and interpreted in a colorful brochure entitled, "The Status of Colored Paper in the Graphic Arts." This is being distributed to interested paper mill marketing personnel and others interested in promoting colored paper.

The results of this survey and the work of the Color Council should enable the printer and graphic artist to give greater values to their customers.

Briefly, the survey showed that printers and graphic artists have these attitudes:

Printers' Attitudes

Printers and lithographers know that color is important and that its use is increasing. However, they admit that they themselves are not fostering its use; in fact, they seem to avoid it, whether it be colored ink on white paper or black or colored ink on colored paper. This seems to be due to several factors. In the case of colored inks on white paper they see problems in the cost of new equipment, in training of personnel, in fear of not being proficient in selecting the proper inks, etc.

With colored paper, they see these problems enlarged even further. One tremendous roadblock to the use of colored paper is the survey finding which points out that 64 percent of the printers feel that most customers who ask for "color" really want color printed on white stock. If the printers think this is so and say nothing because they think it is so, then a barrier is set up against even suggesting colored paper.

Printers were found to have serious doubts, fears and misconceptions about using colored paper. The survey shows that they consider themselves somewhat incompetent in selecting colors of inks to go with colored paper. They think that colored paper reduces legibility—that halftones do not look good on colored paper. Also, they have an inherent fear of delivery schedules of colored paper.

On the positive side, however:

- 84 percent of the printers believe that colored stock enables them to improve the attractiveness of a piece without greatly increasing the cost.
- 73 percent of the printers think that colored paper enables printers to make greater use of their artistic talents.
- 68 percent of the printers think that colored stock enables printers to satisfy cheaply the customer's demand for color.

In other sections of the survey the printers disclosed that they need help in techniques for using colored paper, told what they think of the marketing practices of paper mills and merchants and, in general, gave proof of the fact that they are a major influence in the use of various kinds and colors of paper in the non-artistic area of the graphic arts. They readily admitted, however, that in the area of work coming to them from advertising agencies, that 93 percent of the time the agency specifies the paper to be used.

Graphic Artists' Attitudes

Admittedly, there is a large volume of printed material that never passes through the hands of the professional art director or commercial artist. But considering that a great volume of work—business forms, letterheads, tags and labels, magazines and paper—by its very nature would never come from these sources, the graphic artist is certainly the single largest influence in those areas where the use of colored paper is an artistic option. Unfortu-

Fram a talk presented at the NAPL convention, Hotel Muehlebach, Nov. 18, 1959.

nately, the survey shows that, in general, these people have been overlooked by paper marketers. (Probably because they never place the actual order.)

When asked "Who decided whether a piece would be done on colored paper or white paper?" 79 percent of the graphic artists replied, "I did." Thus, his influence is obvious.

Ninety percent of the graphic artists stated that they use colored paper in the sales promotional and collateral pieces they design. However, 56 percent of these say that this is in less than 30 percent of the pieces. When the 83 percent who saw some benefits were asked what they were they answered:

Adds attractiveness, eye appea	l,
interest, attention	66%
Gives one more color	55%
Economy	35%
The 17% who see no benefit i	n using
colored paper give these reasons:	
Prefer to use ink on white to ge	et
colored effect	56%
White is better, better contrast	49%
Not enough variety in colore	d
stock	13%
Can't print halftones on it	11%
Cost	10%
Available colored stocks not sui	t-
able	7%
Others	21%

The graphic artists who have had experience with colored stock but do not use it for promotional pieces, attribute their non-use to a number of factors, most of which center in three areas: habit, preference for white and technical limitations. They overlook colored stock, according to the survey, because of habit and a feeling that white paper is more versatile and is generally more available. Of prime interest is that only four percent of the artists believe that colored paper limits their design possibilities.

It would seem that not enough of the graphic artists have been exposed to the complete lines of colored paper which are available to them because 37 percent stated they think the ranges of colored papers available are inadequate.

Only about 80 percent of the graphic artists say they have received samples of printing from the mills and merchants. But nearly 90 percent feel that clever, exceptional samples of printing on colored paper would be an aid to them.

One of the major obstacles to greater use of colored paper, of course, is the paper-making machine itself, and the ineconomy of making small batches of colored stock in a wide variety of hues. If this obstacle can be overcome, colored paper may well gain prominence in the graphic arts.—Editor.

As in most research, the survey's results asked nearly as many questions as they answered. For example: Does colored paper really reduce the legibility of printing, as the printers stated? (Most highway warning markers are black on yellow!) Are there any means available to printers and artists to show how colored inks look on colored paper? (We could find none!) Do halftones or colored illustrations suffer when printed on colored paper?" (Nobody seemed to know!)

As a consequence, it was decided to form a Color Council within Du Pont to find the answers to some of these questions. The Color Council consists of a group of people possessed with various skills from the fields of printing, graphic design, advertising, market research, sales promotion, sales, etc.

The Council's first project was to conduct a series of fundamental experiments on the optical, psychological, and aesthetic effects that could be created in printed literature by shifting just one element—paper. Hundreds of test items were printed in Du Pont's Philadelphia printing and lithographing plant and in the shops of several leading Philadelphia platemakers. In each instance, plates, inks and press conditions were held constant while different papers were fed through (even black paper, to make the study as complete and definitive as possible).

This fundamental research provided the answers to many areas of doubt in the printers' and artists' attitudes. Technically, it was found that colored papers didn't necessarily destroy "brightness" and impact — that highlighting effects are essentially relative, not so much the result of the whiteness of the stock but of tonal relationships within the page — that flesh tones and "natural" colors retain their realism and freshness even on fairly dark or

vivid papers, again showing that color sensation depends on relationships within the printed page rather than absolute, objective standards.

On the aesthetic side it was found that colored paper can add elements not achievable any other way. For instance, the colored paper has a unifying effect when several elements—type, halftone, line — appear on the same page. The paper can also shift the mood of the observer.

Color Criteria

The Color Council's second project was the creation of color criteria which are shown to the paper makers as a model, as a methodology, for creating criteria on their own papers. The Council reproduced the fundamental printing elements in basic yellow, red, blue and black inks on specially made white, red, orange, yellow, green, blue and violet papers.

In addition to continuing research and the development of design and printing tools, the Council is publishing a periodical-Design and Colored Paper—which demonstrates some of the artistic potentialities of colored papers. The first issue of the magazine was mailed in June to 4,000 graphic artists, printers and others interested in improving design in the graphic arts. The entire magazine was printed with black ink on colored papers of various hues and textures, selected to solve effectively and economically a few typical design problems. In future issues other complex designs will be featured. Paper manufacturers producing unusual types of colored papers are being invited to show them to the Color Council for possible inclusion in future issues.

Advertising the advantages of colored paper will point in two directions. To the graphic artists, it will be inspirational. Five leading art directors have been commissioned to create insert advertisements: the only specification being that they be done on colored stock. Advertisements beamed at the paper mills and merchants are in an educational vein. They show what the printers and artists interviewed during the survey say they need and desire from the mills and merchants, things which will give direction to the paper industry's selling, advertising and promotional efforts.*

PHOTOGRAPHIC CLINIC

By Herbert P. Paschel



Hand Dodging; Streaks in Halftones

Hand Dodging Techniques

Q: What experience have you had with hand dodging techniques at the camera and in the darkroom? Are these techniques usually accurate and reliable? Are there means of accomplishing the dodging effect other than with the manual "flags", etc.?

E.B.C., Houston

A: The type of dodging your question brings to mind seems to me to have long since passed into oblivion. At one time it was common practice in camera galleries to withold exposure from a certain part of the negative by holding a piece of cardboard or other opaque material in front of the film at that point. The same effect could be realized also at the copyboard.

In both cases the technique was an attempt to equalize exposure. The practice was resorted to for many reasons. Among them were unequal copyboard illumination, limited covering power of the optics with rapid fall-off of image brightness at the edges and corners, difference in reflectance of certain copy units when ganged-up, and the limited exposure latitude of emulsions then in use.

Today, with significant improvement in lenses, lights and films, there is no longer the same necessity for such dodging practices. If, in your case, it is still necessary to employ dodging for the above reasons, it would be wiser to replace defective equipment or, in the case of non-uniform copy, to make a It is impossible for Mr. Paschel to give personal replies by mail, but all questions will be answered in this column as soon after receipt as possible. The columnist also is available to the trade as a consultant for more complex litho problems.

better grouping and shoot the poor copy separately. At best, doging is a hit and miss affair and certainly time consuming.

Dodging is widely used in photographic enlarging and, to a lesser extent, in contact printing. Here it is used to obtain particular effects not possible with straight exposure. In the foregoing the employment of dodging is justified. The manual techniques are gradually giving way to the use of masks, especially in cases where a great number of duplicate prints are required. Enlargers and contact printers are available which perform dodging automatically by electronics.

You might have some specific purpose or problem in mind which would still justify using a dodging technique at the camera. But your question gives me no clue as to what this might be.

Streaks in Halftones

Q: In the past month when I have developed halftone negatives with light backgrounds from 30 percent on down to 10 percent I have gotten streaks through the background. My developer is at the proper temperatire and my agitation is the same as I have been using for years. What is the cause of the streaks and how do I avoid them?

J.S., Brooklyn

A: If you've never had this trouble before you can consider yourself lucky. Avoiding streaks in large areas of highlight tones has always been somewhat of a problem in making halftones in the camera and in screen contacts. Such streaks can be caused by imperfections in the emulsion or anti-halo backing of the film, from improper or inadequate agitation, etc.

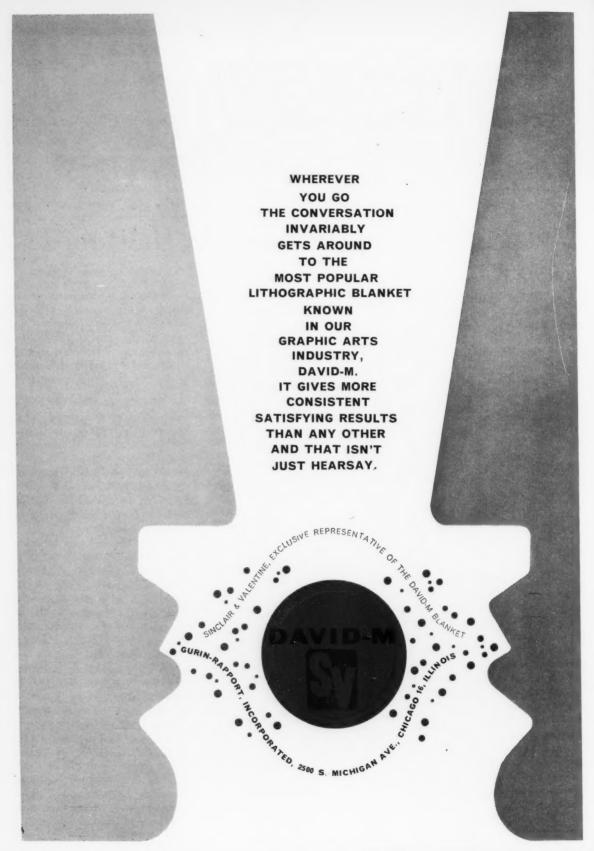
Although you claim to be doing everything the same as always, obviously something has changed. Perhaps you have switched to a different brand of film or altered your exposure technique. Sometimes streaks of this nature can be traced to excessive highlight exposure in relation to the middletone exposure. If the streaks repeat in size, shape and location from film to film check the clealiness of your screen and copyboard cover glass.

In the absence of further data I can not offer concrete suggestions. You'll have to track this down by a process of elimination.

Book Reviews

How Photography Works, H. . Walls. The Macmillan Co., 60 Fifth Ave., New York 11. 352 pp., \$8.50.

(Continued on Page 115)



TECHNICAL SECTION



Radioactive Ink for Graphic Arts

By Marguerite G. Williams

Southampton, England

RADIOACTIVE ink, developed by a botanist and two artists from Louisiana State University will enable artists of the atomic age to reproduce fine prints with greater fidelity and for a longer period of time than with any previous method.

Drawings are made with ink containing a radioactive isotope and are exposed to paper coated with a radiosensitized surface. After they are developed, accurate images of the original drawings appear on the prints.

"Electron Printing," the name given to the process by its inventors, is the result of two years of experiments with a new print-making process. It is extremely simple to carry out and requires no expensive or complicated equipment. The inventors claim that the technique is one of the few developments for making fine prints since the discovery of lithography in 1796.

The process was discovered by Dr. Harry Wheeler, associate professor of botany; his wife, Naomi Wheeler; and Mrs. Caroline Durieux, professor of fine arts. While Dr. Wheeler was engaged in research on the use of radioactive isotopes for "tagging" fungi, he discovered that these plants, if given radioactive food, would "take pictures" of themselves when placed upon photographic paper. At the same time, Mrs. Wheeler was studying printmaking under Mrs.

Durieux and the three conceived the idea that fine prints could be made from radioactive drawings.

Isotopes were obtained from the Oak Ridge National Laboratory and two grants from the Louisiana State University Research Council assisted the inventors in developing the process. They said the process would be greatly facilitated if a faster photographic paper were available.

"The image is transferred from the radioactive drawing to the sensitized paper by the action of invisible beta rays," Dr. Wheeler said. "Since the beta rays are electrons, we have named the process 'Electron Printing.'"

He added that many of the scores of isotopes now available could be used in this process, but that those which emit low-energy beta rays produce the image most precisely. He pointed out that with low-energy isotopes, the human skin gave adequate protection against radiation.

Prints can be made as long as the isotope in the original drawing is "hot." With a carbon isotope, this would be 25,000 years. Effects not possible with other print media can be obtained by using different isotopes and varying the surfaces upon which the drawings are made.

Commenting on the artistic worth of the prints, Dr. Carl Zigrosser, Curator of Prints at the Philadelphia Museum of Art, said: "They have that certain quality of memorable and passionate communication, the controlled expression of personal style, that stamps them as works of art."

Six electron prints were displayed in the United States exhibit on "The Peaceful Uses of Atomic Energy" at the Berlin Fair in 1954, and in mobile exhibits on the same subject, which toured India, Pakistan and other countries in the Middle and Near East the same year.

Color Control Seminar

During November, Rochester Institute of Technology held a seminar on color and color control. The purpose of the three-day meeting was a study of approaches and methods of color specification, tolerance and measurement.

The topics and speakers were "Physics of Color," F. L. Wurzburg; "Color Vision," Dr. Sidney Newhall; "Illumination," Warren B. Reese; "Color Control," F. L. Wurzburg and "Instruments and Techniques for Color Measurement," Warren L. Rhodes.

Show Russian Packaging

Milprint, Inc., a Milwaukee manufacturer of laminating materials, showed, as a part of its display at the recent New York packaging show, a group of 24 packages from Russian manufacturers.

The display was designed to acquaint American packagers with packaging and prices behind the Iron Curtain.

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TECHNICAL BRIEFS

These abstracts of important current articles, patents, and books are compiled as a service of the Lithographic Technical Foundation, Inc. They represent statements made by the authors and do not express the opinions of the abstractors or of the LTF.

Since some of the abstracts are from abstract jornals, LTF cannot furnish photostats of all of the original articles. If the title is marked with an asterisk (*), LTF has no further information than that contained in the abstract itself. Inquiries about these items should be sent direct to the source that is named. If you want copies of U. S. Patents, write direct to the Commissioner of Patents, Washington 25, D. C. Send twenty-five cents for each patent desired. Make checks or money orders payable to "Treasurer of the United States." British patents may be obtained for fortyfive cents from the Patent Office, 25 Southampton Buildings, London, W. C. 2, England, or as in the case with all foreign patents, they may be obtained as photoprints from the U. S. Patent Office, Washington 25. D. C.

If the title of the abstract is not marked with an asterisk (*), LTF can supply photostats of the original article. NOTE: When placing orders for such photostats,

please give the COMPLETE description of article wanted-TITLE, AUTHOR, PUBLI-CATION, and PAGE NUMBERS. When articles appear in LTF's publication Research Progress as well as other publications, Research Progress will be sent. The charge for copies of Research Progress is thirty cents to LTF members and one dollar to non-members plus three cents postage. The charge for photostats is \$1.00 per page (check abstract for number of pages) plus three cents per page postage. Postage charge for orders from places other than Canada and the United States or its territories and possessions is ten cents per page of photostats or ten cents per copy of Research Progress. Orders from companies or individuals who are not members of LTF cannot be filled until payment is received. Orders with payment enclosed receive immediate attention.

LTF also has mimeographed lists of (1) "Periodicals Abstracted by the Research Department" and (2) "Books of Interest to Lithographers." These are available for twenty-five cents each in coin or U.S. stamps. All inquiries concerning these lists and photostats of original articles (not marked with an asterisk) should be addressed to: Lithographic Technical Foundation, Inc., Research Department, 1800 So. Prairie Ave., Chicago 16, Ill.

photographed. The second permits change of size, and reproduction to a specific screen ruling (as for newspaper work). The third is the Brightype method.

COLOR PROVING ON PRESS. CONCLUSION OF A SERIES. James F. Nolan. National Lithographer, Vol. 66, No. 2, Feb. 1959, pp. 24, 26, 2 pages. The color as run on the press is what the customer will finally see, hence press proving is best. The use of the LTF scale, color bars and a dot color proofing gauge is suggested.

COLOR SEPARATION MASKING. PART 3 OF "SEPARATING TROUBLES—FROM COLOR SEPARATIONS." Manfred Rosenow. National Lithographer, Vol. 66, No. 2, Feb. 1959, pp. 22, 94-5, 3 pages. A broad discussion in rather general terms.

SINGLE-POSITIVE FAKED COLOR PROCESS, Hideo Yoshida. Asian Printer, Vol. 2, No. 1 (2nd Quarter), April 1959, pp. 28-31, 4 pages. A description of a method of working from a monochrome original to get three process color printing plates. Masks are used by the retoucher in working from one hand separation to another. Advantages claimed for the method are: 1. Photographic values are retained. 2. Complicated montages are possible. 3. Register is accurate. 4. Shortened time. 5. Less consumption of photographic materials. 6. Easier for inexperienced workers. Illustrated in black and white only.

Planographic Printing Processes

LITHO ETCHING (PHOTO-LITHO NOTES). J. S. Mertle. National Lithographer, Vol. 66, No. 4, April 1959, p. 48, 1 page. Wm. H. Wood and Dolor N. Adams of Harris-Intertype have patented the use of trifluoroacetic acid as the active agent in counteretch, pre-etch, and desensitizing solutions as well as for press fountain solutions. The purpose is to get away from poisonous chromium compounds. Formulas are given and applicability claimed.

WHAT'S NEW IN PLATES? Albert R. Materazzi. Modern Lithography, Vol. 27, No. 7, July 1959, pp. 37-8, 111, 3 pages. The last decade has seen more advances in platemaking than all previous. Some of the advances in surface plates are: non-blinding lacquers, more use of aluminum, improved zinc, new graining techniques, new surface plate coatings (casein and plastic), preand post-treatments of plates, Kodak Photo-Resist, roller coating. For deep etch; nonblinding lacquers, copperizing, Nicohol treatment, improved chemicals, and certain improvements involving diazo sensitized synthetic colloids and electro-deposition of copper. In polymetallic plates the advances have been many, small, undramatic, but considerable in the aggregate. Presensitized polymetallic plates are predicted for the near future. Impressive advances in presensitized plates are increased size, variety, and length of run. Tribute is paid to LTF and suppliers.

Paper and Ink

BAGGY PAPER (IN FOUNTAIN DOPE). John D. Payne. New England Printer and

Photography Tone and Color Correction

*TRICHROMATIC IDEAS IN THE SEVEN-TEENTH AND EIGHTEENTH CENTURIES, R. A. Weale. Nature, 1957, 179: 648-51; Photographic Abstracts, Vol. 38, Part 4, 1958, page 260. Trichromatic theories of color vision were being discussed many years before Thomas Young's formulation, which is usually given priority. Papers by Palmer (1777), Marat (1780), Lomonosov (1756), and a treatise by Mariotte (d. 1684) are discussed. It is concluded that Mariotte originated the idea of trichromacy, Lomonosov had speculated on three retinal mechanisms, and Palmer had given a good account of color deficiency, all before Young's work, the main importance of which seems to have been in speeding the acceptance of the theory.

THE THEORY OF HALFTONE SCREEN IMAGE FORMATION AND ITS BEARING ON PRACTICAL APPLICATIONS. H. M. Cartwright. The Journal of Photographic Science, Vol. 7, No. 1, Jan./Feb. 1959, pp. 1-10, 11 pages. Author's Abstract. (The first Fishenden Memorial Lecture.) Practical halftone photography developed at first almost independently of theoretical considerations, although theory based on geometric

optics provided some guide for the practical operator. The "diffraction" theory is reviewed; it now provides a fairly complete explanation of halftone image formation, and has further defined the conditions for practical work. The techniques required to produce screen negatives and positives with optimum tonal gradation and dot formation for relief and surface printing are discussed. Some techniques have been made possible by the introduction of new types of photographic emulsion. The development of the 'contact" screen is outlined, and the results obtained with available contact and crossline screens are compared with special reference to the gradation and resolution of the final image. 27 references. Discussion.

You Can Accomplish Conversion Work By Three Methods. Adam Henri Reiser. Printing Production, Vol. 89, No. 5, Feb. 1959, pp. 50-52, 3 pages. The three principal methods discussed are: 1. A line shot blowup of reproduction proofs pulled from plates or cuts of the original run. 2. Rescreening the proofs. 3. Shooting the plates directly, preparing them by a recently introduced method. Each method is best for a specific purpose. In the first method, the screen count can be adjusted by enlargement or reduction. A drawback lies in distortion of values in making the proof to be

Lithographer, Vol. 21, No. 10, Nov. 1958, pp. 25-26, 2 pages. Bagginess comes with tight edges, stretched paper, welts, dimples, etc. Misregister, slurs and doubles can result. Low strength paper may stretch while being printed with tacky inks. Troubles are identified as to cause and a few suggestions given.

PUTTING SPECIAL TYPES OF INK ON PAPER. Byron L. Wehmhoff. Printing Production, Vol. 89, No. 3, Dec. 1958, pp. 67, 124-6, 128, 5 pages. Part III of a four part series. Some of the special inks discussed are: doubletone inks, metallic inks, gloss inks, heat-set inks, and water-dried inks (vapor set). Certain peculiarities of the ink-paper relationship and their causes, and the handling of these difficulties are gone into.

FEEDING THE INK FOUNTAINS. (Metal Decorating Section.) Dan Gallagher. National Lithographer, Vol. 66, No. 1, Jan. 1959, pp. 45-7, 3 pages. The limitations on vehicles imposed by the lithographic method of applying coatings are discussed and the formulations consist of one or more of the following groups: 1. litho varnish. 2. oleoresinous. 3. alkyds. 4. heat set. Characteristics required are: proper tack and flow, heat curing properties and stability on press, adhesion and flexibility, suitability for lithographic application. Suitable pigments are listed in the following categories: whites, yellows, oranges, reds, blues.

PROBLEMS OF PAPERBOARD STOCK. Anon. Boxboard Containers. Vol. 77, No. 795, pp. 30-3, 4 pages, March 1959. Many of the printing problems in carton lithography are due to conditions of stock. Tips are given on how to handle problems involving register, moisture content and balance, fanned out image, time required for conditioning (LTF chart reproduced), etc.

Lithography—General

THE HOW AND WHY OF CARTON LITH-OGRAPHY. CHAPTER TWO. THE HISTORY OF LITHO. Anon. Boxboard Containers, Vol. 76, No. 791, Nov. 1958, pp. 18-20, 3 pages. A brief history of the lithographic process, illustrated with presses from a hand press to a Miehle five-color 76 in, press. The place of the Lithographic Technical Foundation in this history is mentioned.

ALUMINUM FOR METAL DECORATING. George L. McLain. Modern Lithography, Vol. 26, No. 12, Dec. 1958, pp. 64, 66, 97, 99, 4 pages. A discussion covering the following subjects: 1. What kind of aluminum? 2. What will be involved in coating and lithographing aluminum as compared with decorating competitive commercial metals? 3. What are the corrosion resistant qualities of aluminum? 4. What are the advantages in the use of aluminum?

POTENTIAL ENEMIES IN THE FOUNTAIN. C. Thomas Mitchell. Graphic Arts Monthly, Vol. 31, No. 1, January 1959, pages 82, 85, 86, 88, 4 pages. The pH value (of a fountain solution) does not indicate the total amount of acid present, but only explains what the actual momentary hydrogen ion concentration is. This reserve acidity in the fountain solution may cause varied

troubles. Ink drying problems may not be from running too low a pH but from having too much potential acidity. A case history is given in which attempts to lower reserve acidity without affecting pH failed because of the hardness of the city water. By replacing city water with distilled water, only 1/6 the amount of fountain concentrate previously used was required to maintain a fountain pH of 4.2. On approximately 500 jobs using this approach, there were no ink drying or plate problems.

ELIMINATING GUM STREAKS. Edward Kidby. National Lithographer, Vol. 66, No. 1, Jan. 1959, pp. 14, 66, 2 pages. Several methods for the removal of gum streaks from surface plates held for reruns are discussed, including: the hot water method, the gum and turps method, the carbolic acid and asphaltum method. Precautions are given on storing plates so as to avoid streaks.

Color and Tone Errors of Multicolor Presses. Frank Preucil. National Lithographer, Vol. 66, No. 1, Jan. 1959, pp. 10-12, 85, 4 pages. (From a 1958 TAGA Paper. Author's Abstract.) The wet ink trapping and tone reproduction of two and four-color lithographic presses are studied from laboratory controlled press runs, and an industry wide survey. Variables included are sets of inks of different Inkometer values, different types of ink, and differences in fineness of screen ruling.

FLUORESCENT MATERIALS (IN FOUNTAIN DOPE). John D. Payne. New England Printer and Lithographer. Vol. 21, No. 12. Jan. 1959, pp. 25-6, 2 pages. Fluorescent materials called "Tone Lightener" and "Brightener" accomplish a range of contrast in halftone negatives comparable to dot etching. Several such materials are listed. Highlighting and contrast control by these methods is described.

PRINTING ROLLERS. WHAT? How? WHY? James K. Brown. American Pressman, Vol. 69, No. 1, Jan. 1959, pp. 39-45, 7 pages. Part I. Emphasis is placed on the importance of the roller in the transfer and distribution of ink, and the importance of having the right roller. The seven types of printing roller materials at present in use are: 1. Gelatin or composition. 2. Leather. 3. Vulcanized oil. 4. Natural rubber. 5. Synthetic rubber. 6. Plastic—polyvinyl chloride. 7. Castable synthetic rubber—notably polyurethanes. Each of these is discussed, with a list of advantages and disadvantages.

PRINTING ROLLERS. WHICH? WHERE? WHEN? James K. Brown. American Pressman, Vol. 69, No. 2, Feb. 1959, pp. 14, 16-8, 20, 5 pages. Part II. (Conclusion). Instructions on which roller to use where. A table lists types of rollers to use and not to use by type of ink and printing process. Each of these combinations of circumstances is elaborated upon in the text.

OFFSET PRINTING TERMINOLOGY. Anon. American Pressman, Vol. 69, No. 1, Jan. 1959, pp. 8, 10-13, 5 pages. Article starts with a plea for greater uniformity of terminology. This is followed by approximately 60 definitions which carry the alphabet through "D."

PRESS DEVICES DO PAY OFF. Herman F. Brauer. National Lithographer, Vol. 66, No. 2, Feb. 1959, pp. 16-17, 2 pages. A brief illustrated story on how sheet cleaners extend the life of plates on long runs.

PRINTING PRESSURE (In Fountain Dope). John D. Payne. New England Printer and Lithographer, Vol. 22, No. 2, Mar. 1959, pp. 27-8, 2 pages. The results of too much or too little pressure between cylinders in a lithographic press are described. Packing, with the aid of the LTF Blanket Thickness Gage, the Colite Packing Gage, and other devices, is explained.

WHY ALL FOUR PRINTING METHODS? Anon. Boxboard Containers, Vol. 77, No. 795, Mar. 1959, pp. 25-7, 3 pages. An inline pioneer (Mead-Atlanta Paper Co., Atlanta, Ga.) recently installed five-color lithographic equipment for the production of folding cartons. Runs of 50,000 to 100,000 cartons with top quality full-color worked out more economically with lithography than gravure. The basic factors essential to good quality in offset printing are cited as: 1. Good material. 2. Good copy, 3. Good inks. 4. Craftsmanship.

Three-Color Printing as Easy as Black-and-White. Edward Burdock. New England Printer and Lithographer, Vol. 22, No. 2, Mar. 1959, pp. 45-7, 3 pages. The printing discussed is described as palatable, pleasing, inexpensive, functional, but not faultless. Copy best reproduced by this Ansco method and its analysis by color charts is discussed. A procedure is given in some detail accompanied by a table of exposure data. Lithographic platemaking and proofing, inks, and pressmanship are explained.

THE COMING AGE OF WEB-OFFSET PRINT-ING. Reginald F. Wardley. New England Printer and Lithographer, Vol. 22, No. 2, Mar. 1959, pp. 52-5, 4 pages. A broad general discussion involving some history, types of presses, paper, paper waste, print quality, plates, inks, blankets, and other points where web offset differs from sheet fed. Some advantages of web offset are cited as: 1. Equipment costs similar to larger sheet fed presses. 2. Plates and platemaking no different from sheet fed work. 3. Combined operations at the end of the press such as perforating, folding, punching, slitting, imprinting, etc. 4. Higher web speeds and lower plate costs mean savings. 5. Roll stock cheaper to buy and easier to store.

AUTOMATICALLY FED METAL SHEETS. William G. Kammerer. National Lithographer, Vol. 66, No. 4, Apr. 1959, pp. 97-8, 100, 102, 4 pages. Illustrated description of mechanization of feeding of metal sheets into lithographing and coating equipment, slitters, and automated grease drum and pail lines. The plant is the U. S. Steel Products Division of U. S. Steel in Camden, N. J. The feeders were made by Dexter. Several schematic diagrams are included.

Publication Printing By The Offset Process. Hyman Safran. American Pressman, Vol. 69, No. 4, April 1959, pp. 24, 41, (Continued on Page 117)

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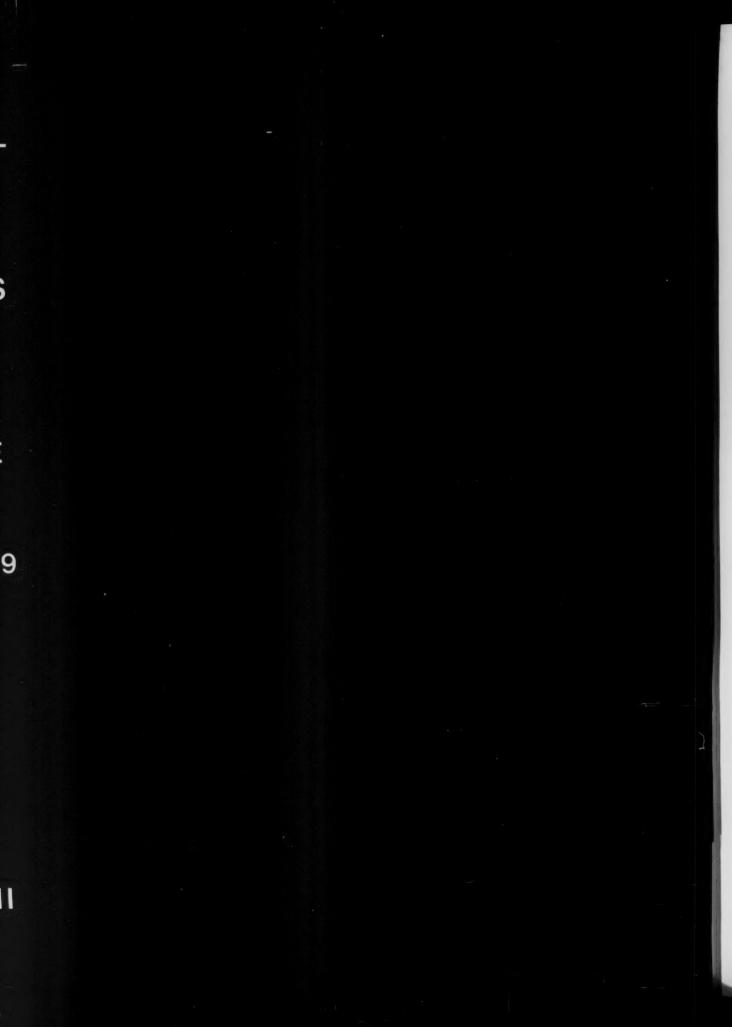
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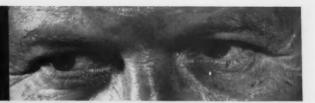
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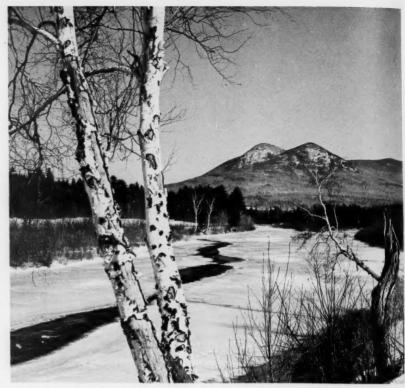
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Photo by Louis C. Williams

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LUSTERKOTE ENAMEL has the high finish on both sides of the sheet and is suitable for use in booklets and brochures of distinctive quality. Lusterkote Cover and Cover-Bristol may be had with the high finish on one side only or on both sides. The 1-side quality has a fully-coated back suitable for halftone printing. Lusterkote Cover and Cover-Bristol fill the need for a distinctive paper for covers, inserts, folders, menus, post cards and other requirements where a quality appearance is essential.

Warren's Offset Enamel is a double coated paper for the printing of pictures by offset lithography. Double coating improves printability and uniformity, resulting in a higher potential of lithographic reproduction. Offset Enamel is available in gloss finish, dull finish, Saxony finish and Falmouth finish.

Warren's CAMEO BRILLIANT is a double-coated paper of exceptional brightness - suitable for de luxe reproduction of halftones by offset or letterpress. Cameo Brilliant is available in both dull and gloss finishes, also in Saxony finish and Falmouth finish.

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It's a story you're hearing again and again in shop after shop: When there's a really fine lithographing job to be done—this beautiful record album cover, for example—there's no substitute for the great new HI-FI Offset Blanket by Goodyear.

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It's easy to see why. You'll have no trouble spotting the flawed, uneven dot structure in the microphotographed comparison spot produced by Blanket "A" during a split run. The distortion's especially plain when you compare with the amazingly clean, sharp reproduction in the HI-FI spot.

This higher-fidelity printing is the work of HI-FI

Blanket's new "micro-textured" printing surface—a Goodyear exclusive. Still other HI-FI pluses: shorter-than-ever break-in time—easier wash-up that requires no pumice—better age resistance. And it can be used with virtually any type paper—or for metal lithography.

And price? Though the new HI-FI Offset Blanket's a giant step ahead of anything else on the market, it carries no premium price-tag. In fact, it doesn't cost you one cent more than ordinary blankets. For actual figures—and the rest of the amazing HI-FI story—see your local Goodyear Distributor. Or write Goodyear, Printers Supplies Sales Dept., New Bedford, Mass.

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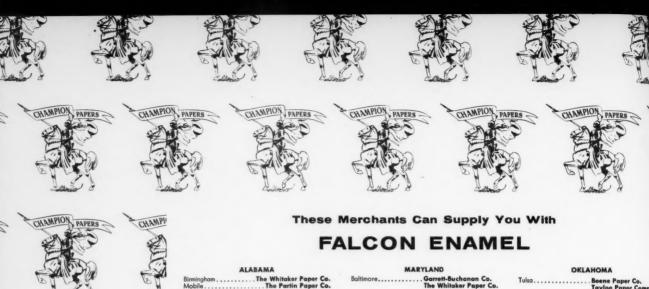
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THE CHAMPION PAPER AND FIBRE CO., 1959

Ready for high-speed performance no matter how long the run, Falcon Enamel by Champion gives quality four-color letterpress reproductions. Standard weights are 60, 70 and 80 pounds. Heavier weights for magazine covers and other special uses are also available. Designed for the varied requirements of the advertiser and publisher, it is effectively used for direct mail, catalogs and periodicals.



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LITHO CLUB NEWS

NALC Plans Mid-Season Meeting

THE mid-season Council of Administration meetings of the National Association of Litho Clubs, will be held Jan. 22 and 23 at Hartford, Oshkosh and Tulsa. On Saturday, the conference will close with a tri-city telephone hook-up.

The use of the multiple long distance line has proved successful in the past two council meetings and has reduced the travel expense for council members.

Fred A. Fowler, president of NALC, told ML in Washington, "The tri-city hook-up has now been worked out so that it goes off smoothly, with a minimum of confusion and 'mike-fright.' The operation is fast-moving and highly successful."

The Eastern Division meeting, being held in Hartford at the Statler-Hilton Hotel, will include representation from the Litho Clubs of Baltimore, Boston, Buffalo, Connecticut Valley, New York, Rochester, Philadelphia, South Florida and Washington, D. C.

Chairman of arrangements in this Division is Edward J. Yuskevich, president of the Connecticut Valley Litho Club. Presiding national officer will be Rae H. Goss, of Chicago, 1st vice president. National Officers assigned to this meeting include Raymond E. Geegh, Washington, executive secretary; David Gandleman, Connecticut Valley, assistant secretary; Stephen Rubenstein, Philadelphia, historian; and James Fraggos, treasurer.

The Central Division, which will conduct it's affair from the Hotel Raulf in Oshkosh, has as arrangements chairman, Alden Fergusen, president of the Litho Club of Central Wisconsin. Presiding national officer will be John Murphy, Detroit, 2nd vice presi-

ON, OH

dent. National officers will include Russell B. Waddell, Racine, educational chairman; Jack Miller, Milwaukee, secretary; and Frank Petersen, Cincinnati, technical director.

Clubs will include Canton, Central Wisconsin, Chicago, Cincinnati, Cleveland, Columbus, Dayton, Detroit, Grand Rapids, Indianapolis, Milwaukee and Twin Cities.

The Southwest Division, with clubs assigned from Atlanta, Dallas, East Texas, Fort Worth, Houston, Los Angeles, Oklahoma City, St. Louis, San Antonio, Shreveport and Tulsa, will meet at the Tulsa Hotel. Chairman will be Dugal McIntyre, president of the Litho Club of Tulsa. Presiding national officer will be Mr. Fowler and other national officers will include: William O. Morgan, Chicago, club coordinator; and William Dodd, Houston, assistant club coordinator.

In previous years the meeting has been a one-day affair. It is felt the extra half day will enable more business to be discussed in preparation for the phone conference Saturday at 1 p.m. (CST). A special message from president Fowler will conclude the phone session.

Scheduled to come up for discussion will be the obtaining of a permanent, paid executive secretary and a permanent headquarters.—Mike Geary.

Philadelphia

Halpern Discusses Stripping

The effects of temperature and humidity on stripping operations were discussed by Bernard R. Halpern, of Du Pont, at the November 23 meeting of the Philadelphia Litho Club in the Poor Richard Club.

Prior to the talk, the club reelected all officers for another year. They are Russell Johnson, Du Pont Printing Division, president; Howard T. Harcke, Graphic Arts, Inc., vice president; Andrew Given, National Decalomania, treasurer, and Joseph H. Winterburg, Phillips & Jacobs, Inc., secretary.

Elected to the board of governors in a close race were Carmen J. Donato, Smith, Kline & French; Michael J. Linguiti, Allen, Lane & Scott; and Paul Martin, Charles P. Mills & Son. They defeated Theodore Bernstein, Drake Press; William J. Brooks, Brooks Co.; and Benjamin Wojtowicz, McCandlish Litho Co.

Elected to the board from the suppliers group was Harold A. Deal, Sinclair & Valentine, who won over Andrew Guenther, Cabrun Ink Products Corp., and Harvey Shallette, Seaboard Printing Inks. Stephen Rubenstein, past president of the club and historian for NALC, installed the members.

There will be no meeting of the club in December or January, because of the Christmas holiday and the Printing Week observance. The annual quiz night is set for February. Mr. Harcke, substituting for president Johnson, who was enroute home from the NAPL convention in Kansas City, announced tentative plans for a field trip to the Government Printing Office next spring. He also called attention to a graphic arts conference in Philadelphia March 26, under the sponsorship of the Technical Association of the Pulp and Paper Industries.

Hr. Halpern, a member of the Philadelphia club, used slides to demonstrate atmospheric effects on stripping materials. He showed that a 20 percent change in RH or a 20° change in temperature can cause following changes in length of a 30" piece of material: acetate — 1/16"; triacetate — 1/25"; styrene—1/64"; and Cronar—1/64".

He listed the humidity variations in the Philadelphia area and showed how they can cause changes in stripping materials. These changes depend on the nature of the material, with glass virtually nil and some papers and films quite high.

In addition, there is the problem of sudden bursts of heat on stripping ma46TH ANNUAL GAME

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PROGRAM

500 INC.
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JANUARY 1, 1960 • PASADENA, CAL DRNIA

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For a fast clean run the printer of the Rose Bowl game program is sure to win with Sterling Letterpress Enamel.

In particular, the whiteness, the gloss and the printability of Sterling Letterpress Enamel permits inviting reproduction of illustrations on the cover. Gloss inks add to the sparkle that helps to sell the program. Text pages are printed on West Virginia's excellent economy grade, Velvo Letterpress Enamel.

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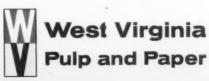
You get quality papers plus all the benefits of a direct mill-to-you sales policy when you buy or specify West Virginia papers. On your next estimate, compare the quality and then see the savings for yourself. For full details contact one of the offices listed below, or write West Virginia Pulp and Paper Company, 230 Park Avenue, New York 17, N.Y.

The Rose Bowl program cover is on 90# Sterling Letterpress Enamel, and the text is on 70# Velvo Letterpress Enamel. Printing by Lederer, Street and Zeus, Berkeley, California. You'll enjoy the game more with a program, so for your copy call the West Virginia office nearest you.

Commercial Printing Paper Sales Fine Papers Division

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terials, as from the heat of an arc lamp. "There is a constant tug-of-war between the atmosphere in the plant and the materials being used," he noted.

Biggest help in eliminating these troubles is the use of a dimensionally stable sheet, he concluded.★

Milwaukee

Visit American Can Plant

Members of the Milwaukee Litho Club visited the Milwaukee plant of American Can Co. as the educational feature of the October meeting. The Milwaukee plant manufactures containers for food and dairy products, carbonated beverages and beer.

Baltimore

"Practical Quality Control"

Robert Luciani, Haynes Lithograph Corp. discussed a practical program of quality control from the camera to the bindery at the November meeting of the Baltimore Litho Club. The discussion included control by the art director of the operations by suppliers up to the point of platemaking.

At the October meeting of the club, Merle Kirston, Chandler and Price Co., discussed "Magnetic Ink, Automation and the Commercial Lithographer." He covered the problem of tolerances and other production problems in check printing with magnetic inks.

New members admitted to the club are Daniel Brown, William B. West, Harold A. Finchum, Jr. and William B. Murry.

The club's annual Christmas Party and Ladies' Night will be held Dec. 19.

St. Louis

Purple Plate Featured

The precoated and prelaquered purple plate and the new S plate by 3M were covered in a presentation to the November meeting of the St. Louis Litho Club.

The meeting also elected the new slate of officers of the club. The newly elected are Raymond Eckles, president; Oscar Augustine, vice-president; Frank Grobe, secretary and Laurence Held, board of governors.

New York

Plate Preparation Covered

H. J. Prince and C. A. Ziroli, Ulano Products Co., Brooklyn, presented an illustrated lecture on material used in art and copy preparation, masking, stripping and plate making to the November meeting of the New York Litho Club.

At the October meeting the club heard Charles Kars, General Aniline and Film Corp., Ozalid division, who spoke on the Dichrome Process of Color Proving. An added feature was an open discussion, by the members, of the Dahlgren dampening system.

New members admitted to the club are Gerard A. Widmann, John De Vita, Murray Balley, Sidney S. Fink, James A. Conte Jr. and Malvin Collins.

Miami Valley

Management Discussed

The Graphic Arts Association and the Miami Valley Lithographers Association of Cincinnati presented the first in a series of lectures on supervisory developments recently at a dinner meeting of the Cincinnati Club, with John Klinker, U. S. Printing and Lithographing Co., presiding.

George J. Gore, assistant professor of management at the University of Cincinnati's College of Business Administration, addressed the 45 members present on "Managerial Functions," which he listed as planning, organizing, staffing, directing and controlling.

Typo and Litho Discussed at Washington



Pictured here with Raymond Geegh, (L) newly elected president of the Washington LC are: (L to R) Albert Tucker, past president WLC, J. Leonard Starkey, guest speaker, Fred Fowler, NALC president and John Laverine, past president WLC.

HOWARD N. KING, Harris Intertype Corp. discussed the value of typography and its relationship to lithography at the November meeting of the Washington Litho Club.

The members heard an address, in October, by J. Leonard Starkey, who spoke on "The McCall Corp. Web-Offset Story." In addition to outlining the successful application of web-offset at the publication printing company, Mr. Starkey showed color slides of the web-offset facilities at McCall.

Elected as new officers of the club at the November meeting were Raymond E. Geegh, Government Printing Office, president; Walter Conway, Conway & Associates, 1st vice president; Palu H. Schafer, Harris-Seybold Co., 2nd vice president; Arthur L. Nugent, Coast & Geodetic Survey, secretary; and Frank P. Frazzano, Sauls Lithograph Co., treasurer.

New members of the club are Arthur Brooks, Raymond E. Donnelly, Frank Gordon, George Hoover, Joseph P. Matthews, Bernard Pasis, Stewart N. Smith, Patrick E. Clark, Wilbur Edwards, Bruce Haigh, David Harmon, Kenneth King, Albert Malachuck and Frank Stewart.

The club's Christmas Party will be held Dec. 19 at the Sheraton Park Hotel.

Shreveport

Color and Process Discussed

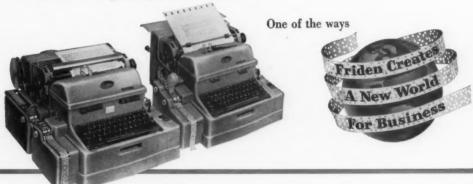
W. P. Gaines, president of the Shreveport Litho Club, presented a talk and demonstration of the difference between process work and color work, at a recent meeting.

The club's Christmas Party will be held Dec. 12 at the Knights of Columbus Hall, Shreveport, La.

HOW FRIDEN JUSTOWRITER SOLVES COMMUNICATIONS PROBLEM FOR MANY OFFICES

This marvelous 2-unit "Tape-Talk" machine turns out professional type-sets with justified margins at substantial cost savings compared with hot metal composition ... offers ideal way to handle bulletins, manuals, price lists, booklets, directories, catalogs, direct mail literature, house organs, inter-office memoranda and employee communications of many kinds.

The Friden Justowriter produces these clear, accurate typesets on direct image plates for duplicating machines or in form of reproduction proofs for lithographic printing. Fourteen different Justowriter type faces, sized from 8 to 14 points, are available.



On this Justowriter Recorder (unit #1) any typist becomes an expert type compositor. Her usual typing -- without involving special positioning or extra time -- produces simultaneously (a) a type-written sheet, for visual check, and (b) punched paper tape with identical copy coded into the holes.

Justowriter unit #2, the Reproducer, receives code tape ... "reads" it ... and automatically composes the original copy in clear, accurate justified-margin form. All kinds of copy -- straight matter, centered, run arounds, line leaders, tabular matter handled with ease at 100 words a minute.

You have been reading a Justowriter-composed message ... note the automatically justified margins and overall pleasing appearance! Write today on your business letterhead for additional information on the justifying type-composing Justowriter -- one of the most immediately functional Tape-Talk machines now "breaking new ground" in the new world for business created by FRIDEN, Inc., San Leandro, California.

FRIDEN SILVER ANNIVERSARY. 1934 · 1959

Dayton

Discuss Humidity

John L. Kronenberg, S. D. Warren Company, spoke on "Air Moisture and Relative Humidity," to the November meeting of the Dayton Litho Club. He discussed the many problems connected with moisture control in the pressroom and water balance on the press, suggesting possible solutions.

Connecticut Valley

Past President Night

Featured at a recent meeting of the Connecticut Valley Litho Club was



Frank Poll (L) presents Senefelder bust to Andrew Pagliaro.

Past President Night. A Senefelder bust was presented to out-going president Andrew Pagliaro who served the club as treasurer, 1st and 2nd vice president, and in 1958-59 as president.

Presentation of the bust was made by charter member and past president, Frank Poll. Mr. Poll was not only instrumental in forming the Connecticut Valley Litho Club but also helped in organizing the National Association of Litho Clubs.

Highlight of the evening was a talk by John M. Lupo, Jr., DiNoc Chemical Arts, Inc. His talk contained predictions of future developments in every phase of the lithographic process.

The November meeting of the club featured a round table meeting with club members acting as moderators.

Los Angeles

Discuss Metallic Inks

Robert Gans of the Gans Ink Co. will address the December meeting of Los Angeles Litho Club with special pointers on the use of metallic inks.

Members at the November meeting elected the 1960 officers of the club. The newly elected are James Shippam, president; Joseph Immiti, vice-president; Frank Young, secretary and Richard Reed, treasurer.

The educational portion of the November meeting featured a film, about the problems of selling in any field, starring Monty Wooley, entitled "The Golden Hours."

Five new members were admitted to the club in November. They are Robert Eggert, Allan Whisnant, Wesly Wessels, Paul Burger and Charles Wilkinson.

Cleveland

Today's Citizens

Louis B. Seltzer, editor of the Cleveland Press, asked the November meeting of the Cleveland Litho Club "What Kind of Citizens Are We Today?" in a talk which included a discussion of women's part in politics and a review of current political events.

The meeting was the annual Ladies Night.

The October meeting heard C. M. Connor, Hamilton Paper Co. explain the manufacture and use of text and cover papers.

The club has granted honorary membership to all past presidents of the NALC

New members of the club are Richard Dettmer, David E. Blatter and Henry W. Tuennerman.

Boston

'Web-Offset Today'

"Web-Offset Today," describing the range of products which are "going web," will be given by W. Howell Lee, ATF, at the December meeting of the Boston Litho Club.

The talk will be illustrated with film slides of new web offset installations, and views of significant features. Mr. Lee will also show samples of different types of jobs now done on web offset, with particular emphasis upon quality as well as speed.

Susquehanna

Color Theory and Application

John M. Lupo, Jr., Arts, Inc., presented the theory and application of color to the November meeting of the Susquehanna Litho Club. He also explained color separation and masking.

The club, which is relatively new, reports that it has completed plans for a monthly news letter and has selected as its motto "Gaining in Knowledge." At present the club has 189 members.

Detroit

New Developments Discussed

DeWitt G. Manley, American Type Founders Co., reviewed many of the new machines, techniques and ideas presented by leading equipment manufacturers and suppliers at the recent Graphic Arts Exposition, at the November meeting of the Detroit Litho Club. Among the subjects covered were photosensitized plastics, new press sizes, presensitized plates and photomechanical composing.

John Heaton, Harold Kornath, Thomas Murphy and John Bladdick have been proposed as new members of the club.

Cincinnati

Suppliers' Night

"Suppliers' Night" was observed by the Cincinnati Litho Club on Nov. 10 with 20 suppliers' representatives being introduced by Frank Petersen, technical director of the National Association of Litho Clubs.

Candidates for officers for 1960 were announced for the "blue" and "white" tickets by their respective campaign managers.

The club will hold its annual election of officers at a monthly dinner meeting on Dec. 8 at the Golden Goose Restaurant in Kentucky.

Following the nominations, there was a round-table discussion of purchasing problems. Among the guests were Floyd Phillips and Kenneth

Kramer, both members of the Dayton Litho Club.

Anthony Bianchi has been named arrangements chairman for the club's annual dinner-dance on Jan. 9 at the Hartwell Country Club.

Twin City

Employers-Suppliers Night

George A. Mattson, Printing Industry of America, addressed the November meeting of the Twin City Litho Club. The meeting was devoted to employers and suppliers. Mr. Mattson spoke on "Supervision in the Lithographic Industry."

In keeping with the title, the meeting featured a display of equipment from various suppliers in the Twin City area. Many employers also attended the meeting as guests.

Chicago

Officers Elected

The Chicago Litho Club at its November meeting elected new officers for the 1960 year and heard a talk on "Contact Screens" by Ken Waughtal of Eastman Kodak Co.

Under recently revised by-laws installation of the 1960 slate is to take place at the club's December meeting, scheduled for Dec. 17, instead of in January, as has been the practice in the past. This enables the new administration to get its committees and plans organized for the coming year.

Those elected as new officers were Emil F. Winter, president; James K. Martin, 1st vice president; Richard F. Boever, 2nd vice president; John L. Jachimiec, secretary, and Wm L. Byers, treasurer.

Young Lithogs

Two Views of Pressroom

Two views of pressroom organization were presented to members of the Young Lithographers, New York, last month at a meeting in the Advertising Club. Philip Quartararo, superintendent of the offset division of Peter F. Mallon Co., and Carl Greco, pressroom foreman of Kipe Offset Process Co., were the speakers.

No meeting of the club is scheduled for December. In January the program will be devoted to a discussion of magnetic imprinting.

Mr. Quartararo outlined the importance of planning, checking specifications, making a layout to suit the press and, most important, discussing the job with key members of the production team—estimator, cameraman, platemaker and pressman, to be sure

in advance that the job will be produced in the most efficient and economical way.

Mr. Greco noted that the accent is on color today. He stressed the importance of company production meetings to discuss problems involving color process, viewing, etc. "It is important to provide for maintenance of presses and all other equipment to insure good color quality on the sheet," he declared.

In answer to a question on the use



Litho Club Secretaries

ATLANTA
Bob Scheuer, 2118 Brannen
Rd., SE

BALTIMORE Robert Press

BOSTON Vincent Aliberte, 2010 Revere Beach Pkway, Everett

BUFFALO John Demske

CANTON
Clayton Betz, 531 Grosvenor
Dr., NW, Massillon, O.

CHICAGO
John Jachimiec, Container

Corp. of America, 1301 W. 35 St. CINCINNATI Harold Biddle, 3308 Galbraith Rd.

CLEVELAND Raymond Gallagher

COLUMBUS Ed Carter, 873 William St.

CONNECTICUT VALLEY Irving Gross

DALLAS
A. G. Copeland, 3116 Commerce St.

DAYTON
Loomis Pugh, 1809 W. Columbia, Springfield, O.
DETROIT

Erhardt Toensfeldt, c/o Drake Ptg. Co., 2000 W. 8-Mile Rd., Ferndale

FORT WORTH Paul Hansen, 5317 6th Ave.

GRAND RAPIDS
Joseph Stevens

HOUSTON Grady Caldwell, Caldwell Ptg. Co., 407 M&M Bldg.

LOS ANGELES Al Griffin, 520 Monterey Rd., Pasadena

MILWAUKEE Jack Miller, 2572 N. 21 St.

NEW YORK Ed Blank, 401 8th Ave.

OKLAHOMA CITY
J. Earl Hunter, 536 NW 48 St.

PHILADELPHIA Joe Winterburg, 618 Race St.

PIEDMONT Mrs. Jo W. Shaw, 502 Security Bank Bldg., High Point, N. C.

ROCHESTER Ed Potter, 198 Weston Rd.

ST. LOUIS Ray Eckles, 7023 Radom

SHREVEPORT Roena Bradford, PO Box 397

SOUTH FLORIDA Ken Miller, 13451 Alexandria Ave., Opa-Locks

TULSA Mrs. M. K. Hare, 2521 So. Birmingham Place

TWIN CITY
Fred Schultz, Buckbee Mears
Co., Toni Bldg., St. Paul

WASHINGTON
Art Nugent, 1130 S. Thomas St.,
Arlington, Va.

CENTRAL WISCONSIN
Bill Zimmerman, Rt. 2, Box
531, Menasha

of an electronic scanner on a group of transparencies, Mr. Quartararo observed that "this is a problem, but with some care in grouping shots with similar densities, a good job can be done."

Mr. Greco was asked why lithographers don't spend more time seeking better balanced process inks and less time "fooling around" with separations. He replied that, in his opinion, press inks today, while not perfect, are vastly superior to those of a few years ago.

Neither speaker thought the new wrap-around letterpress plates pose an immediate threat to offset.

MVLA Elects Brinkman

Harry E. Brinkman, Cincinnati Lithographing Co., Inc., was elected president of the Miami Valley Lithographers Association, Inc. of Cincinnati, for the coming year, at an annual steak dinner meeting recently. He succeeds W. T. Stevenson, Photo Color Co.

Other officers elected are: Eric Nielsen, Nielsen Lithographing Co., vice president, and Andrew Donaldson, Strobridge Lithographing Co., treasurer.

C. H. Colman, retiring assistant managing director of the Graphic Arts Association of Cincinnati, was the honored guest at the dinner.

Selling Discussed

Fred Smith, management consultant, gave a talk on "Selling is Service" before 50 members of the sales executive section of the Graphic Arts Association of Cincinnati, at an "Early Bird" breakfast on Nov. 6 in the Cincinnati Club.

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PIA Aims to Improve Profits

The Printing Industry of America opened its 1960 campaign to reverse the declining trend of industry profits with a financial conference and a series of training institutes, coaching conferences and workshops in Chicago, during November.

Among the activities were a "Managing Your Business," training institute, the largest such course yet held by PIA, with 60 companies represented.

Other items covered included "Development of An Industry Budgeting System," and "Financial Automation."

Walter McArdle, president of PIA, in summarizing the results of the first step in the 1960 campaign, said that more than 1,000 copies of "Managing Your Business" have been distributed and 40 instructors have been trained to conduct local classes on the subject. These factors he said, "point to profit improvement campaign."

NALC Sends Out Questionnaire

THE growing need for a permanent office for the NALC and a permanently employed national head-quarters secretary, was the subject of a letter by W. Stuart Grau, chairman of the committee appointed to consider this matter, by Fred A. Fowler, president of the National Association of Litho Clubs.

The rapid expansion of NALC, now operating with 32 member clubs and over 4,000 lithographers, as individual members, has forced the matter of a national headquarters to become an increasing problem.

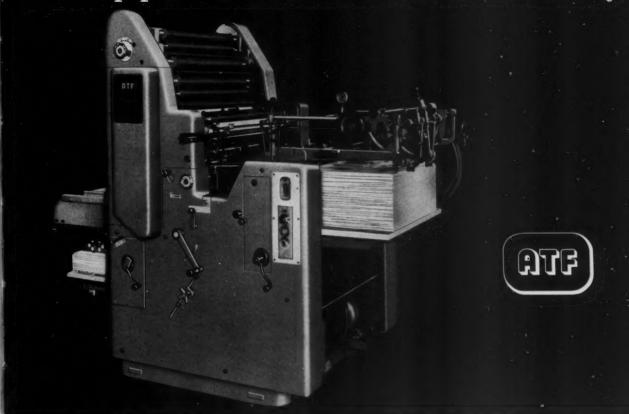
"Improvement of the scope and quality of NACL service to its member clubs" the letter pointed out, "requires the establishment of a permanent headquarters office and secretarial service. There has been an expression of general agreement at the council meeting in Canton last January and at the convention in Minneapolis last June, that the need exists for such services.

"Since a number of proposals have been made for methods to satisfy this need, the Permanent Secretary and Permanent Headquarters Committee feel that an expression of opinion from each club, prior to the next council meeting in January, 1960, would contribute substantially to the best solution," Mr. Grau's letter concluded.

Mr. Fowler has asked all member clubs to participate, by forwarding their views on the matter to W. Stuart Grau, chairman, Permanent Secretary and Permanent Headquarters Committee, NALC, c/o The Miehle Company, 2011 West Hastings St., Chicago 8.

the ATF Chief 24

turns out popular commercial sizes...fast, economically



Big Producer

of printing and profits!

You'll be delighted with the huge quantities of quality work this busy Chief can produce...in sheet sizes most in demand: $8\frac{1}{2} \times 11^{\prime\prime}$ four-up with full bleed and room to spare; $9 \times 12^{\prime\prime}$ four-up; and $6 \times 9^{\prime\prime}$ eight-up. And the Chief 24 requires less floor space than any other press handling $9 \times 12^{\prime\prime}$ jobs four-up.

A favorite with printing plant owners and pressmen, the ATF Chief 24 has many features that make printing easier, faster and more profitable.

The fast plate clamp reduces your changeover time to the very minimum. A quarter turn of three clamps is all that is needed to engage or disengage the plate edge.

Helical gears, plus full bearers, promote smooth, quiet operation...and help maintain better register by eliminating "play."

As for the inking system, there just isn't a finer one on any offset press! Nineteen ink rollers (plus the fountain roller) give you superior coverage on even the most critical jobs, including those with large areas.

The Solna Variator gives you stepless speed control from 2500 to 6000 impressions per hour...lets you select the exact running speed most suitable for each job.

For complete information about *all* operating features and full specifications, send for the new booklet on the ATF Chief 24.



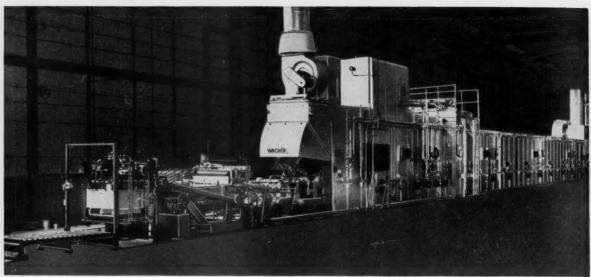
PULL SIDE GUIDES let you make register adjustments while the press is running. Two sheet detectors, close to the headstops, check the sheet ¼" from the gripper edge. A crooked or late sheet, or any imperfection deeper than ¼" will automatically trip the press. Yet the imperfect sheet will be delivered, unprinted and uncounted, to the delivery pile for removal.



American Type Founders

200 Elmora Avenue, Elizabeth, New Jersey

ATF Type Faces used in this advertisement: Headlines, Craw Clarendon. Body Copy, Century Expanded with Italic



The Wagner 1/6th D. E. F. Oven in a complete "Coater Line" for 100 sheets per minute.

We've Teamed Up With Time!

To meet the demands of the Metal Decorator, for speeds up to 100 sheets per minute and thirty-four inches by thirty-six inches maximum sheet size, this Wagner Oven has been installed in many continents.

It has a Direct Externally Fired (D.E.F.) air heater and circulating blower for the first or come-up zone;

thus affording a rapid temperature rise. It is excellent for highly volatile materials.

The balance of the heating chamber is economically taken care of by the Wagner Rotary Air System.

There is no obligation for surveys and preliminary layouts.

When thinking of Progress — think of Wagner!

WAGNER LITHO MACHINERY Metal Decorating Machinery 555 Lincoln Avenue, Secaucus, N. J.

Recent developments in

Coil-Fed Coating Processes

Part I

By Anthony W. Pomper
Director of Engineering, Waldron-Hartig Div.
Midland-Ross Corp., New Brunswick, N. J.

MOST metal strip coating installations have been limited to narrow width strip in the past. In many cases, speeds were slow. With the increasing demand for coated strip for architectural and other purposes, the trend in recent years has been to wider strip and higher speeds. Equipment for continuously treating and coating aluminum strip more than 60 inches wide and up to .064 inches thick, at speeds up to 200 fpm, is now in operation. Several installations of similar magnitude, for steel and aluminum, are being designed and built.

Present installations of rugged, heavy duty machinery for 60-inch strip have proved that the operation is practical and that carefully engineered machinery can be installed and put into operation with minimum difficulty. Although some coating lines are over 400 feet long, a combination of the Lorig system and mechanical guiding holds the strip to as close as $\pm\,1/16''$ lateral shift. Multiroll accumulators, generally hydraulically loaded, permit continuous operation during coil transfer at the entry and exit end of the line, and assist in maintaining controlled tension throughout the line. This effective control of strip tension is especially important in the wider lines, with the increased range of strip widths and thicknesses to be processed on a single installation.

Speeds of future strip lines may certainly be expected to exceed the present general range of 50 to 200 fpm. Speeds are now limited by space and cost. However, vertical cleaning and treating equipment has already been proved effective, and requires less floor space at high speeds. With further developments in quick drying coatings and the application of existing engineering knowledge of high velocity air drying, cost and space requirements for high speed will be further reduced. Coating equipment for sheet steel and for strip other

than metal is already operating at 500 to 1,000 fpm. Mechanical handling of the strip on complex lines is possible at high speed, as has been demonstrated on annealing lines. Speeds of over 1,000 fpm should be practical.

Additional processes such as printing, laminating and embossing are available for strip lines. Some installations of this type have already been made. Future installations may incorporate printing, laminating and embossing as well as cleaning, treating, coating and drying in a single line of equipment.

Typical Lines

Before proceeding further, it would be well to look at a typical continuous strip processing line. The equipment illustrated diagramatically in Fig. 1 is both typical and

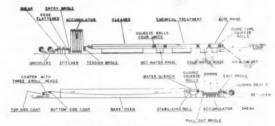


Fig. 1. Metal Strip Paint Line

basic. It includes all the necessary operations and machinery, although some of the components shown may not be included in an economy line. Starting at the entry, the strip is uncoiled, with the leading edge of a new coil fastened to the trailing edge of the expired coil by stitching or welding. A shear allows the ends to be squared and scrap to be trimmed. The uncoilers are generally the expanding mandrel type, but a single turret uncoiler may be substituted for two mandrel types. The turret uncoiler may be equipped with cones or expand-

From a talk presented at the 25th NMDA convention, New Orleans, Oct. 12-14.

ing chucks to hold the coil. This machine picks up the full coil (Fig. 2) and rotates it to the same position for

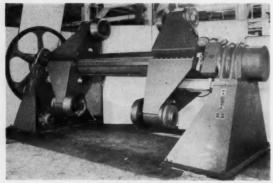


Fig. 2. Turret Uncoiler

every splice, close to the splicing equipment.

An entry bridle between the splicing unit and the accumulator controls feed into the accumulator. (Fig. 3.)

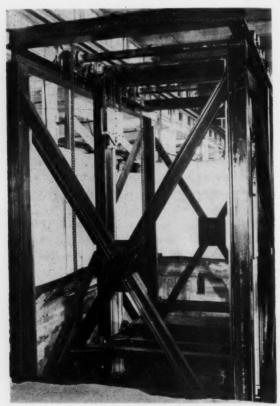


Fig. 3. Accumulator

This bridle can be stopped and jogged forward or reverse independently of the line when the splice is to be made. The accumulator stores enough strip to allow the process to continue at full speed during splices. It can be made with the top or bottom carriage floating and loaded hydraulically or by gravity. A horizontal looping car can also be used instead of a vertical accumulator. Fig. 1 shows a hydraulically loaded unit with floating top carriage. The input bridle speed is controlled by the position

of the accumulator, assuring that the carriage floats continuously to maintain constant tension. Since the top carriage is movable, it can be lowered to facilitate threading strip through the line. The hydraulic loading provides simple, accurate adjustment of strip tension over a wide range.

Following the entry accumulator, a tension bridle may be used to increase the line tension through the chemical treatment stage. This treatment usually consists of a series of enclosures, complete with tanks, temperature control, pumps, piping and spray nozzles directed at both sides of the sheet. The stages are cleaning, rinse, chemical treatment, rinse and acid rinse, followed by dry-off. Part of the tanks and enclosures for a 64'' wide strip line are shown in Fig. 4.

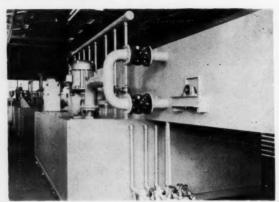


Fig. 4. Chemical Treatment

The main tension bridle is just ahead of the coater, sometimes incorporated into the coater frame. A coater with three heads, two for the face and one for the back of the strip, is shown in Fig. 5. Each head consists of

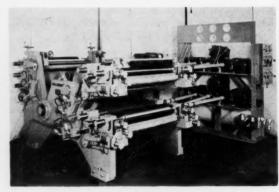


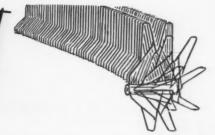
Fig. 5. Coater

three rolls (two precision metering rolls and a rubber covered transfer roll), although the same machine can be supplied with two roll heads as illustrated in Fig. 1. All controls are readily accessible, and the construction is open for ease of roll removal. Drives are direct coupled to eliminate any chatter or torsional vibration.

Following the coater, the strip passes through an oven, generally divided into two to four zones of temperature and air volume control. Fig. 6 shows one section of a

better finished products

... maximum efficiency



YOUNG BROTHERS OVENS

for every MITAL Decrating requirement

OUNG BROTHERS Metal Decorating Ovens, built in a variety of types, are known for their excellence because Young Brothers engineers have a fundamental understanding of the baking and drying problems of the Metal Decorating Industry. Their "know-how" is based on 60 years of experience building individually designed ovens for all baking and drying processes.

A metal decorating oven is a highly mechanized production unit in a specialized field — and it will only perform to maximum efficiency if it has been built by men thoroughly experienced in every phase of oven engineering.

Through their specialized experience, Young Brothers engineers constantly develop new and better methods of handling, heating, and moving air . . . for faster, more efficient production . . . for more automatic and accurate controls so vital to the synchronized operation of the production lines. New light weight rigid, tubular wickets reduce conveyor load and help to eliminate sheet marking. Reduces necessity for wicket preheating.

You can be sure of the best when you select a Young Brothers Oven because it is the product of the finest experience in the industry — that is why it will bring added profits out of your production.

Investigate the advantages of Young Brothers Ovens today — details are available to you without obligation.



1841 COLUMBUS ROAD



CLEVELAND 13, OHIO



Battery of large, high speed D.E.F. Metal Decorating Ovens



High speed, combination D.E.F. and D.I.F. Metal Decorating Oven



D.I.F. Metal Decorating Oven with zone control and recuperative cooling

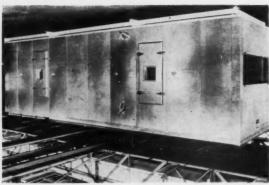


Fig. 6. Dryer

metal strip bake oven. Hot air is passed through headers above and below the strip, and through slots or nozzles for uniform velocity across the strip. When the coating is dry, the strip must be cooled, usually in a water spray section. The excess water is squeezed off by a pair of rubber covered pinch rolls (Fig. 7) which are hydrauli-

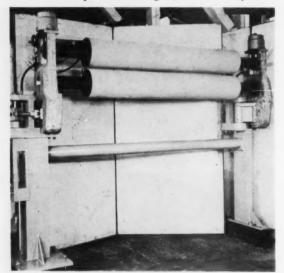


Fig. 7. Guided Squeeze Rolls

cally controlled to guide the strip. A sensing nozzle or paddle detects the edge of the strip and shifts the roll assembly laterally and angularly for both instantaneous and continuous correction of strip position.

The main tension bridle (Fig.~8) provides the force to pull the strip through the dryer, supporting it in a shallow catenary without any support rollers. Since the tension required to maintain a certain sag varies approximately with the square of the distance from the coater to the next support point at the other end of the dryer, a long dryer requires a very high tension.

The exit accumulator and exit bridle function similarly to their counterparts at the entry end of the line. A shear cuts the strip for transfer, and rewinding is accomplished with either one or two recoilers. When only one recoiler is used, it is generally equipped with a hydraulic stripper and coil car, and possibly a belt wrapper, to reduce the time required to start a new coil.

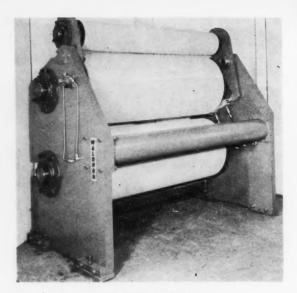


Fig. 8. Tension Bridle

The drives for the heavy duty strip coating lines are preferably multi-motor DC drives, with a separate generator for the main entry and exit sections. Tension control through the catenary can be by current control or by direct sensing of strip tension with a strain gauge load cell or dancer roll and reactor. The narrow, lighter duty lines may use a simple electromechanical variable speed main drive at the pull out bridle, hydraulic tension controlled hold-back at the tension bridle and entry bridle AC jog motor for inching the exit bridle, and hydraulic winder drive, controlled by the accumulator.

There are many variations of the basic coating line, and a number of recent developments available to im-

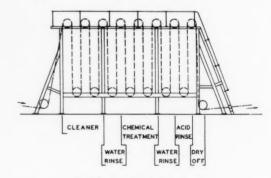


Fig. 9. Vertical Chemical Treatment

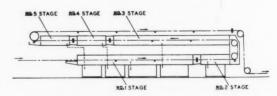


Fig. 10. Stacked Horizontal Treatment

prove performance or increase the versatility. As higher speeds may increase the length of the line and therefore the cost of the building, several methods are used to economize on space. These affect the chemical treatment section and the dryer or baking oven.

The chemical treatment space requirements can be reduced by vertical or stacked horizontal treatment. The vertical arrangement is shown in Fig. 9. Each stage consists of two or more vertical passes with a squeeze roll at the end of the section. The strip passes from one section to another at the top to eliminate transfer of chemicals from stage to stage. The stacked horizontal treatment (Fig. 10) is similar to the standard horizontal arrangement except that it is built on two or more levels, with strip carrying rolls at the end of each level to reverse strip direction. Generally, all tanks are at ground level. The strip will track well without intermediate mechanical guiding equipment in either of these arrangements because of the ample wrap around the carrying rolls.

Drying oven space requirements can be reduced in various ways. When prime coat followed by top coat is desired, the coaters and dryers can be stacked at two levels, with coaters at the same end and the strip returning between the ovens, or with one coater at each end. Another arrangement consists of a single two-side coater with a double-back oven. The underside of the strip passes around one or two water-cooled chrome plated rolls to permit the strip to reverse direction and return through the second half of the oven. The underside coat is dry enough when halfway through the oven that it does not pick off on the rolls. Total oven length is cut in half and catenary depth is only one quarter of the equivalent horizontal oven catenary for the same tension.

(CONTINUED NEXT MONTH)

Government Sells Equipment

The office of General Services Administration, Federal Supply Service

of the Government has announced that it is accepting bids on 297 lots of photographic, recording, electronic, printing, duplicating and miscellaneous equipment.

Among the items listed are a 19×25 " offset press with a Baldwin press washer, and a Multilith camera and a burning frame 33×44 ". The bidding on the wide variety of equipment closes Dec. 23.

Information is available from the

office at 4511 Rhode Island Ave., Brentwood, Pa.

Coffee Printing Has New Location

The Coffee Printing Co., which does lithographing, job printing and mimeographing, has opened for business in its new location at 9 Lauderdale St., Selma, Ala.

Mr. and Mrs. Theodore Coffee and their son, Eugene Coffee run the business.

You asked for it: Here it is.....

FLAT VARNISH

an AMAZING, NEW

for the Metal Decorating Industry!



It's a baking varnish, smooth and highly resistant to scratching and smudging. You'll find it meets ALL of YOUR other requirements, too. Briefly, it's what the metal roller coating industry has been looking for . . . for 30 years.

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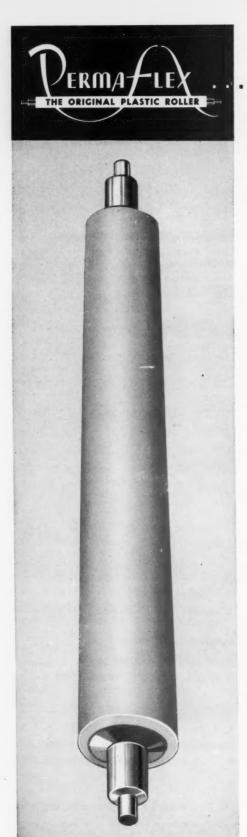
- Flatness in any range from 0 to 75
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- Leaves no ridges—no stearate lines no silk lines
- Has uniform gloss
- No settling
- Excellent fabrication qualities

May we have a representative call and tell you more about this revolutionary, new product which is the result of extensive investigation and research in our Research and Development labs. Call or write.

LILLY VARNISH COMPANY · Indianapolis, Indiana

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LILLY VARNISH OF MASSACHUSETTS, GARDNER, MASS.
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..ROLLERS give you the BEST for LESS

Perma-Flex Printing Rollers not only give you better printing by their softness, but they also give greater ink distribution in transfer, reduces roller bounce on plates, they stand up longer, and are non-melting, non-swelling.

The soft flexible covering on Perma-Flex Rollers is very tough. These rollers give you better production than other rollers under heavy punishment.

Perma-Flex Rollers are unaffected by heat, cold or heavy humidity. They are easier on wash-up and are non-porous. They keep their tack even after long runs and many wash-ups. They remain perfectly uniform after constant use.

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MEMBER: Lithographic Technical Foundation, National Association of Photo Lithographers, National Association of Printing-Ink Makers, National Printing-Ink Research Association, N. Y. Employing Printers Association.

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EVERYTHING FOR THE LITHOGRAPHER • MANU-FACTURERS OF PRINTING, LITHOGRAPHIC INKS AND SUPPLIES

CREATIVE PRINTING the key to more profits

By Walter B. Graham

President, Printers' Sales Idea Service Co., Omaha, Neb.

OW many times have you or one H of your salespeople gone to a business firm to pick up a dozen or more forms on which to bid. Back at the office you sat down to figure the cost of all this printing. You figured all the angles to keep down the cost, such as running combinations on the same plate. You took a very short mark-up on the stock in order to be "more competitive." When you got all finished you figured that the price you had was a good low price and that you would get this business, only to discover that another printer in your town got the business \$100 or \$200 lower than your price. You scratched your head and wondered, "How is this possible?"

Start Creating

The time is long past due for printers to get started selling and producing creative idea printing and get out of this competitive rat race that is driving profits down to the point where the investment in equipment is producing a poor return.

Listen to this "Letter to the Editor" recently printed in a printing trade publication:

"I am the wife of a printer and also his business partner. For almost 10 years I have seen my husband work long hours, cutting stock, locking forms, handsetting headings, creating and planning letterheads, programs and all other typical "small printshop jobs" and finally running the presses and printing.

"For all the time, sweat, life blood and effort, there is such a small margin of profit. Of course, we are a small one man shop and my husband has held another job during the day. However, all the more reason to figure we should have a good profit."

There was a letter to the editor in this same issue which really struck home. It was titled: "Can Something Be Done?" To quote from the letter:

"With what I have seen over some 47 years of printing, I would hesitate to advise any young man to take up printing. My husband has been a printer for over 20 years and I am sorry to say it is a field I would not want our son to follow."

I don't care if you have a "typical small shop" or if you've got 100 employes, creative idea printing can be sold at a good profit on a large scale or a small scale to firms of all sizes. Any company interested in selling its product or service will have a keen ear for you as a creative printer.

I feel bad when I take my vacation and drive through many towns and see dozens of signs that say, "Job Printing Done Here." How much better it would be if those signs were changed to read, "Creative Idea Printing Done Here" with the means to back up this statement.

We Can All Specialize

We all tend to envy the printer who specializes in a particular phase of the printing business. The label printer, the forms printer, the poster printer, etc. The truth is — we can all specialize in creative idea printing without investing in more equipment, and it is this field in which a printer

can perform a service most desirable to a customer and at more profit to bimself

Several years ago I heard a talk on how a printer should promote his own business. The speaker stated that he believed in selling accounts rather than orders. I do not fully agree with this statement because I believe that you must start out by selling orders to eventually have an account. It is so much easier to see a prospect and say, "Mr. Jones, here is an idea you can use in your business." If the prospect likes the idea he asks you how much it will cost, and you can end up with a profitable printing order. In selling idea printing you can make more profit on a \$50.00 order than you can on a \$200.00 bid job.

Best Prospect

In selling creative printing your best prospect is not the purchasing agent of a company, because he's interested in only one thing: a low price. Your best prospect is either the head of the firm or the sales manager. Get in with the people interested in sales and work with them and they will look at your services as being similar to an advertising agency where the main concern is in printed material that will help sell merchandise or service. These sales-minded prospects are hungry for ideas.

You as a printer can better provide creative printing ideas because you know ink, you know paper, you know presses, you know bindery operations, you know press and paper sizes.

You may say that you have no creative talent . . . all right then, try this: Get someone in your area who does have some creative talent to work with you for awhile by providing you with some rough copy and layout material for good prospects, and you can ease into the creative field without too much expense. Also be on the lookout for printed ideas that you can show your prospects. You can find ideas in restaurants, hotels, bowling alleys, stores, etc.--just keep your eyes open. Then start a filing system for ideas under various business classifications. This file of ideas, when put to use, can be your source of profitable printing orders.*

From a talk at the NAPL convention, Kansas City, Nov. 20, 1959.



This printer can relax. He'll get his paper on time—on the regular afternoon delivery from his Hammermill Merchant's warehouse.

Turning rush orders into routine deliveries is your Hammermill Merchant's specialty. It's part of his job to answer emergencies quickly and conscientiously by having an adequate stock. When you order from him, you get good service—and stay out of the warehouse business and avoid overstocking headaches.

Next time call your Hammermill Merchant. He's listed on the following page.

11

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Pueblo Carpenter Paper Company	Springfield Springfield Paper Co.
CONNECTICUT	MONTANA
Hartford Henry Lindenmeyr & Sons	Billings Carpenter Paper Company
Hartford Green & Low Paper Co., Inc.	Great Falls Leslie Paper
Hartford Carter Rice Storrs & Bement	NEBRASKA
New Haven, Carter Rice Storrs & Bement	Lincoln Carpenter Paper Company
DISTRICT OF COLUMBIA	Lincoln Western Newspaper Union Omaha Carpenter Paper Company
Washington R. P. Andrews Paper Co.	Omaha Western Paper Company
FLORIDA	NEVADA
Jacksonville Virginia Paper Co., Inc. Miami E. C. Palmer & Company	Reno Zellerbach Paper Co.
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	Concord C. M. Rice Paper Co.
GEORGIA	NEW JERSEY
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Quincy Irwin Paper Co. Springfield The Capital City Paper Co.	New York, Linde-Lathrop Paper Company
INDIANA	New York Reinhold-Gould Inc. New York, Union Card & Paper Co., Inc.
Evansville The Diem & Wing Paper Co.	Rochester The Alling & Cory Co. Syracuse The Alling & Cory Co. Troy Troy Paper Corporation
Fort Wayne Butler Paper Co., Inc.	Syracuse The Alling & Cory Co.
Indianapolis Crescent Paper Co.	Troy Troy Paper Corporation
IOWA	Utica The Alling & Cory Co.
Des Moines Carpenter Paper Company	NORTH CAROLINA
Des Moines Western Newspaper Union	Charlotte Caskie Paper Co., Inc. Raleigh Epes-Fitzgerald Paper Co., Inc.
Sioux City Carpenter Paper Company	NORTH DAKOTA
Sioux City Western Newspaper Union	Fargo Leslie Paner
Topeka Carpenter Paper Company	Fargo Leslie Paper Fargo Western Newspaper Union
Topeka Midwestern Paper Co.	OHIO
Wichita Western Newspaper Union	Akron The Alling & Cory Co. Cincinnati The Diem & Wing Paper Co.
KENTUCKY	Cincinnati The Diem & Wing Paper Co.
Louisville Southeastern Paper Co., Inc.	Cleveland The Alling & Cory Co. Cleveland The Petrequin Paper Co. Columbus The Central Ohio Paper Co.
LOUISIANA	Columbus The Central Ohio Paper Co.
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Baltimore Baltimore-Warner Paper Co.	
Hagerstown Antietam Paper Co., Inc.	OREGON Fugene Zellerbach Paper Co.
MASSACHUSETTS Paston Carter Pice Storre & Rement	Eugene Zellerbach Paper Co. Portland Zellerbach Paper Co.
Boston, Cook-Vivian-Lindenmeyr Co., Inc.	PENNSYLVANIA
Springfield Carter Rice Storrs & Bement	Allentown Lehigh Valley Paper Corp.
Worcester Carter Rice Storrs & Bement	Erie Daka Paper Company

Erie Durico Paper Company
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Philadelphia, The J. L. N. Smythe Company
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Scranton Megargee Brothers, Inc.
York, Andrews Paper House of York, Inc.
PHODE ISLAND

Providence . . Carter Rice Storrs & Bement Providence, Cook-Vivian-Lindenmeyr Co. SOUTH CAROLINA

Columbia, Epes-Fitzgerald Paper Co., Inc. SOUTH DAKOTA Sioux Falls Leslie Paper

TENNESSEE Chattanooga . . Southern Paper Company Knoxville, Southern Paper Company, Inc. Memphis Tayloe Paper Company Memphis Western Newspaper Union Nashville Clements Paper Company TEXAS

Amarillo . . . Carpenter Paper Company Austin Carpenter Paper Company
Dallas Carpenter Paper Company
Dallas E. C. Palmer & Company
Dallas E. C. Palmer & Company El Paso Carpenter Paper Company Fort Worth . . Carpenter Paper Company Harlingen . . . Carpenter Paper Company Houston ... Carpenter Paper Company Houston ... E. C. Palmer & Company Lubbock ... Carpenter Paper Company San Antonio . . Carpenter Paper Company UTAH

Salt Lake City, Carpenter Paper Company Salt Lake City, Western Newspaper Union Salt Lake City Zellerbach Paper Co.

VIRGINIA

Lynchburg Caskie Paper Co., Inc. Norfolk . . Epes-Fitzgerald Paper Co., Inc. Richmond, Epes-Fitzgerald Paper Co., Inc. Richmond Richmond Paper Co., Inc. WASHINGTON

Seattle Zellerbach Paper Co.
Spokane Zellerbach Paper Co. Tacoma Standard Paper Co. Walla Walla Zellerbach Paper Co. WEST VIRGINIA

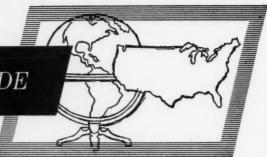
Charleston Copco Papers, Inc. Clarksburg . . . R. D. Wilson-Sons & Co. WISCONSIN

Milwaukee . . The Bouer Paper Company



"4:15 and everything is here. My Hammermill Merchant came through again."

NEWS about the TRADE



W. Harvey Glover of Sweeney Dies

W. Harvey Glover, retired president of Sweeney Lithograph Co., and executive and active member of many graphic arts associations, died Nov. 20, after a long illness, at Monmouth Medical Center, Long Branch, N. J.

During his career in the graphic arts, Mr. Glover had been associated with Tudor Press, Boston, Wynkoop, Hallenbeck & Crawford Co., New York and Sweeney Lithograph Co., Belleville, N. J. At the time of his death he was serving as a consultant at Sweeney, recently merged with Federal Paper Board Co.

Mr. Glover was very active in graphic arts associations. He was a past president of the New York Litho Club, New York Craftsmen's Club and the International Association of Printing House Craftsmen. In addition he was a member of the board of directors of the Lithographers National Association, a director of the National Association of Photo-Lithographers, and a member of the Montreal and the Boston Craftsmen.

Mr. Glover was honored at a testimonial dinner held at the Hotel Roosevelt, New York in 1952, which drew nearly a thousand persons from coast to coast.

In addition to his activities in the graphic arts, Mr. Glover was president



W. Harvey Glover

of Consolidated Vauze Mines, Ltd., Toronto, a member of the Engineers Club of Montreal, the Canadian Club of New York, the Canadian Society of New York, the Lotos Club in New York and the Down-Town Club in Newark, N. J. a meeting Nov. 24, with non-member firms to brief them on the points of the dispute and the industry position.

In a statement to the meeting, Wayne C. Wade, executive secretary, reported that the Association believes that the industry in San Francisco "cannot absorb any further increase in costs and still retain a position competitive with firms outside the area."

Both sides in the dispute appear adamant in their positions and an early settlement does not seem likely.

Court Overrules NLRB

The U. S. Court of Appeals in Chicago last month absolved Arrow Press, Milwaukee, Wis., of an unfair labor practice charge. The company had previously been found guilty of the charge by the National Labor Relations Board.

The charge revolved on the fact that Arrow had discharged an employe, who, it said, had violated the company's non-solicitation rule by passing out union authorization cards and who had tried to induce fellow workers to slow down production. Local 7, ALA, to which the employe had belonged, presented the case to the NLRB.

In its ruling the Court stated that the evidence indicated that the company had not acted from a discriminatory motive.

C of C Elects Ralph J. Wrenn

Ralph J. Wrenn, president of Stecher-Traung Lithograph Corp., San Francisco, was elected, in November, to the San Francisco Chamber of Commerce for 1960.

15 Firms Struck in San Francisco

Fifteen lithography firms in the San Francisco area were struck Nov. 23, by 1,150 members of Local 17 of the Amalgamated Lithographers of America. While the strike is now in effect against the 15 largest plants in the area, which are members of the Graphic Arts Employers Association, the settlement will also affect

100 other shops in the area which are not members of the association.

The ALA, it is reported, is asking for pay increases and new contract wording on working rules. Information on the exact nature of the demands was not available at press

The Employers Assocviation held

John Laverine Retires

John J. Laverine, has retired after 42 years of service with the U. S.



John J. Laverine

Navy Hydrographic Office. He served the office as a lithographer.

Mr. Laverine was press-room chief and senior employe at the Hydrographic Office, which covers a city block in Suitland, Maryland, a suburb of Washington, D. C.

Mr. Laverine's retirement prompted The Hydrographer, U. S. Navy, to decide to honor retired employes of the office and organize The Hydrographic Office Retired Employes Association. Notice was sent throughout the country to former employes of this organization's retired list, and a special luncheon was held at Andrews Air Force Base, with 30 retired lithographers attending.

A special gold badge has been cast for the members of this newly formed association, of which Mr. Laverine was elected the first president. Members may pick up this badge at the Security Office when visiting the facilities at Hydro. The badge allows them free access without escort throughout the area. Members are also allowed to attend the monthly staff luncheon of Hydrographic Officers, held at the Navy Yard.

Mr. Laverine is past president of the Washington Litho Club and has served this organization in a number of capacities for many years and is currently chairman of the entertainment committee. At the last meeting of the litho club, he was given the title and credentials of "Honorary Member."

Mr. Laverine is a member of the Social Oyster Club, a sixty year old, exclusive club of plate printers, whose membership includes many prominent local citizens.

Four Join San Francisco GAEA

The Graphic Arts Employers Association of San Francisco has added four member firms to its lithographic division. They are Charles R. Wood & Associates, California Printing Co., R. J. Cardinal Lithograph Co., and Lithographic Producers.

Benjamin Kulp Retires

Wilson-Jones Co., Chicago forms printers, with large lithographing facilities, announced the retirement on Oct. 31 of Benjamin Kulp, chairman of the board, after more than 40 years with the firm.

Zastrow Advances MacNamara

Frank MacNamara has been appointed general manager of the Sheboygan plant of Zimpelman Zastrow, Inc., printing and lithographing firm. He formerly was manager of the offset division of Kiekhaefer Corp., Fond duLac, Wis.

Emil Fehlo has been appointed estimating and production manager in the Milwaukee office.

Graphic Controls Sales Increase

Graphic Controls Corp. has reported sales of \$7,522,000 for the fiscal year 1959, a 35½ percent increase over the \$5,535,000 for fiscal 1958. Profits after taxes for the fiscal year increased 22 percent to \$549,000. This compares with \$450,000 for fiscal 1958.

The company, with headquarters at 189 Van Rensselaer St., Buffalo, N. Y., is a holding company with eight subsidiaries making business forms and charts and folding cartons.

The three-year-old holding company has 289 stockholders, of which almost 70 percent are employes. There are about 450 employes, almost half of whom are stockholders. The Board of Directors declared a dividend of 18 cents per common share payable to stockholders on Jan. 13.

To Honor Ambassador Lodge

Henry Cabot Lodge, United States Representative to the United Nations,



Henry Cabot Lodge

will receive the Franklin Award of the New York Employing Printers Association and address the annual Printing Week Dinner on Monday, January 18, in the Hotel Commodore, New York.

Ambassador Lodge, a member of President Eisenhower's cabinet, was designated for the Franklin Award in recognition of his leadership in the search for peace and justice in world affairs.

Presentation of the award will highlight a week of special printing events in New York, including the 18th Exhibition of Printing which will be sponsored by the New York Employing Printers Association January 18-21 in the Hotel Commodore.

Presentation of the award will be made by Donald B. Thrush, Thrush Press, Inc., chairman of the board of the New York Employing Printers Association. Toastmaster will be William H. Walling, Publishers Printing-Rogers Kellogg Corp.

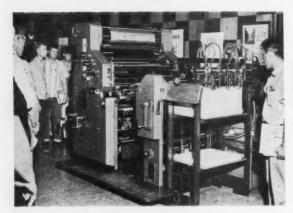
Two Buy Company

Mrs. Marguerite G. Savoie, general manager, and Guerdon S. Allen, vice president, have acquired all of the stock of Southern Minnesota Printers and Lithographers, Inc.

The stock formerly was held by Frank L. Tracy, Minneapolis, and George S. Tracy and Perkins-Tracy Printing Co., St. Paul.

Organized in 1958, the company provides printing services of all types.

ATF Holds West Coast Show



Members of San Fernando Craftsmen Club view ATF Chief 15 in action at West Coast Show, in Los Angeles.

OFFSET presses and equipment exhibited by American Type Founders Co. at the recent Graphic Arts Exposition, were demonstrated at a special "Post Graphic Arts Exposition Show" held by the Los Angeles branch of ATF in October. West Coast printers from as far north as Seattle, Wash. came to Los Angeles to see ATF's new line of offset presses, cutters, and allied equipment.

Fifty members of the San Fernando Club of Printing House Craftsmen, chartered a special bus in order to see the new Chief 126 offset press, the new 42" Senator paper cutter with fully automatic electronic spacing and the ATF Typesetter and Hadego Photocompositor.

The Craftsmen also witnessed a demonstration of three-color process job on the ATF Chief 15.

Lind Acquires Plampin

Lind Brothers, New York corporate and financial printers, has acquired the Plampin Lithographing Co., a pioneer in offset lithography for pointof-sale display material and promotional literature.

Plampin, also located at 121 Varick St., New York, will retain its corporate identity and be operated as a division of Lind Brothers. The company, founded in 1914, specializes in promotion printing for nationally advertised products in the drug and chain store fields. It has complete lithographing facilities, including plate-making in halftone and process colors, and offset color presses.

Lind Brothers, founded in 1928, specializes in the development and production of corporate and financial communications. The firm serves many of the largest corporations in American industry.

Lanston Buys Unitronics

Unitronics, Inc., a subsidiary of Universal Match Corp., St. Louis, has been purchased by Lanston Industries, Inc., Philadelphia,

The Lanston organization, founded in 1892 by Lanston Monotype Machine Co., is a leading manufacturer of graphic arts equipment. It also manufactures photomechanical equipment for lithography, photoengraving, gravure and offset printing as well as the Monotype "family" of typesetting and typecasting machines for which the company was originally named.

Unitronics, established in 1849, produces photo-engraving equipment, specializing in electronic measuring devices for the graphic arts industry.

Pre-Posting Tests Reported

Test results of the new techniques for indoor pre-posting of 24 and 30 sheet outdoor posters were reported to the October meeting of the Outdoor Poster Committee of the LPNA.

The pre-posting technique involves a new process of advance, pre-paste backing of posters known as Donnelly Vac Pack. Poster sheets and blanking are processed indoors, in advance of the actual posting operations. It would eliminate much of the posting equipment and bulky application paraphernalia now used outdoors.

Mixed results were reported to the committee on tests made with posters produced in member plants. There were variances in the results as they pertained to the papers used in the poster production. The committee reached no conclusions regarding the tests at this time.

Discussion centered around a survey of standard cost factors going into poster production, but no action was taken. It was noted that there has been limited growth in the use of 30-sheet posters and that the silk screen process is playing a more important part in production.

Install Two-Color Press

Lithographic Producers, San Francisco, has installed a new two-color Miehle No. 38 press, the second two-color for the organization, which is owned by the Ben Franklin Press and Kennedy-Bosch of San Francisco.

Two Consolidate in Capital

Graphic Arts Press, Inc., and Washington Planograph Co., Washington, letterpress and offset printing firms, have announced the completion of their consolidation and have moved into their new location at 1110 Okie Street, N. E. The plant contains 32,000 square feet.

The company reports the building improvements and the addition of new machinery and typesetting facilities totalled approximately \$750,000. The payrolls of the combined plants are in excess of a half million dollars.

The firms will operate as the Graphic Arts Press.

Keystone Transfers Campbell

Robert Campbell has been transferred from the sales department to be assistant color matcher at the new plant of the Keystone Printing Ink Co., 241 West Oxford St., Philadelphia.

A. CARLISLE & Co., San Francisco, has installed a new four-color Miehle 61 offset press, its second press of this same model.

NAPL Cost Treatise

The NAPL has just released to its members a revised, 1960 Edition of "A Study of a Simplified Method for Building Budgeted Hourly Cost Rates in a Lithographic Plant." This cost treatise carries complete instructions, and shows in full detail Budgeted Hourly Cost Rates set up for practically all cost centers used in the lithographic industry.

The basic detail going to make up these hourly rates are set up in schedules. Cost rates are shown for both manufacturing and all-inclusive costs under three rates of productivity for both one or two shifts production. The study also carries examples on how cost rates are computed for straight-time, time-and-a-half and double-time labor costs.

This study, which was prepared by Frank R. Turner, Jr., cost accountant, and Walter E. Soderstrom, executive vice president of the NAPL, is available to NAPL members without charge to non-members, \$25 a copy. Copies can be secured by writing to the NAPL, 317 West 45th Street, New York 36, N. Y.

Rossotti Heads Label Div.

Charles C. Rossotti, chairman of the Board, Rossotti Lithograph Corp., North Bergen, N. J., was elected president of the Label Manufacturers Division of the Lithographers & Printers National Assn. at its Annual Fall Meeting, Oct. 27-29, at the Edgewater Beach Hotel in Chicago.

Mr. Rossotti succeeds James L. Murphy, vice-president, Consolidated Lithographing Corp., Carle Place, N. Y. Other officers elected were: Nathaniel Gamse, president, Gamse Lithographing Co., Inc., Baltimore, vice-president; W. S. Martin, executive vice-president, Wheeler-Van Label Co., Grand Rapids, Mich., treasurer, and Thomas J. Curran, LPNA assistant executive director, director.

Speakers at the sessions included Allen K. Heydrick, director of education and training, Link Belt Co., who discussed "The Challenge of the 3 C's"; Curt Kornblau, director of research, Super Market Institute, on "Super Market Retailing"; Edward B. Miller, attorney, on "State Taxation of Inter-

state Sales," and J. Norman Goddess, attorney, on "Labor-Management Reporting and Disclosure Act of 1959."

LPNA Executive Director Oscar Whitehouse also spoke on "Business Forecast for Labels" and Thomas J. Curran, executive director of the label group, led a general session on "New Developments in Federal and State Regulations Affecting Labels" on the closing day.

To Discuss Dampening

A forum and exhibit on dampening systems and dampening problems will be sponsored by the Lithographic Division of the New York Employing Printers Association on Thursday evening, Dec. 10, at the Henry Hudson Hotel.

The event is intended to help lithographers with their number one production problem, according to Seymour Udell, chairman of the division. It will feature speakers representing four leading manufacturers of dampening sys-

tems. The systems will be on exhibit in the same room.

Participants will be William G. Mullen, consultant to Photon, Inc., and inventor of the Mullen Dampening System; James Fox, New York Sales Manager of Minnesota Mining & Manufacturing Co., who will discuss the 3 M Dampening System; Norman Rowe, vice president, eastern division, Ideal Roller & Mfg. Co., Inc., who will speak on the Plast-O-Damp System; and Harold P. Dahlgren, president, Dahlgren Lithographic Equipment Co., Inc., manufacturer of the Dahlgren Dampening System.

Charles W. Latham, NYEPA lithographic consultant, will participate in the question-and-answer session.

L. E. Smith Retires

L. E. Smith, Appleton Division manager of Consolidated Water Power & Paper Co. has retired.

Harold J. Lausman, Assistant Manager, will succeed Mr. Smith.

Nine San Francisco Litho Plants Displaced

Part of fourteen block area in San Francisco from which nine litho plants must move to make room for a redevelopment project.



Redevelopment of a 14-block area in San Francisco's oldest printing district will force nine lithographers, two combination plants, and a lithographic platemaking firm to find new quarters within the next two years. Acquisitions of buildings to be torn down to make way for new structures in the Golden Gateway redevelopment project will start early in 1960. To be relocated are these lithographers:

Advance Printing Co., Castagno & Sons, John D. Hooper Lithograph Co., Modern Lithographers, Inc., Pacific Shipper, Inc., Phil Rude & Co., Howard Printing Service, and Paul Dulfer Lithographing Co. The two combination plants are Leonard N. Biss and Paragon Press. The platemaking firm is Harrison-Escallier Litho Plate Service. In addition, two long established typographers, A. C. Gollan & Son and Johnck & Seeger will have to find new locations. Zellerbach Paper Co., another occupant, has already moved.

Einson-Freeman Advances Two

Alexander Stauff and Philip Kaplan have been advanced by Einson-



Kaplai

Ctrouf

Freeman Co., Long Island City, N. Y. Mr. Stauff has been appointed chief art director for the company and Mr. Kaplan has been given increased responsibilities in his position as art director.

Mr. Stauff has been an art director with the company for the last fifteen years and a member of the New York Art Directors Club.

Mr. Kaplan has been an art director with Einson-Freeman for 20 years.

The company reports that the new appointments are part of a new program designed to meet the changing trends in display advertising function and performance. The program is to be conducted by a 10 man group of art directors under the supervision of Mr. Stauff and Mr. Kaplan.

The company states that the move was initiated in view of the large increase in the expenditures for consumer advertising.

LPNA Cost Studies

Several studies of importance to members of the Lithographers & Printers National Assn. have been undertaken by the Cost, Accounting and Financial Management Committee.

A study of methods of distributing selling and administrative expenses to indicate ways of recovering these items is being worked on. Various Committee members are also analyzing the application of direct cost to lithographic and printing accounting. Reports will be made to Association members when both are completed.

Several other subjects are under study. These include salesmen's travel and entertainment expenses; replacement of equipment (to include related depreciation policies; development and operation of cash flow charts; effect of product mixes on profits (to include methods of determining profits contribution of various products; suggested schedule for retention of records and methods of controlling factory labor costs through adequate records.

The Committee continues to emphasize the need of each plant for current and accurate cost information. It would like to receive from member plants articles covering pertinent subjects and case histories of help to accounting and financial personnel of other plants.

Cuneo Awards Four

Arthur J. Ambolino, offset pressman at the Philadelphia branch plant of the Cuneo Press, Chicago, picked up \$75 in awards from the company's suggestion system recently. A proposal for "eliminating wrinkles on the Hantscho press by running a brush across the web" brought him \$50 and the other \$25 was for a suggestion for "putting a fold guide on the Hantscho press. In the bindery Mario De Cristoforo received \$25 for suggesting that motors be protected by covering them with plywood. A \$10 award went to Edward Baker for suggesting the installation of mirrors on in-plant motor trucks so truckers can see workers.

Howard Karp Joins Goerz

C. P. Goerz American Optical Co., Inwood, N. Y., has appointed Howard Karp as its sales manager. He replaces Harold Vogt, who has joined the sales staff of Kenro Graphics, Inc., New York.

Mr. Karp had been assistant manager for Paillard Products, Inc., New York for three years before joining Goerz.

Keith Arthur Joins YPO

The Young Presidents' Organization, New York, has elected Keith J. Arthur, president, Arkansas Printing & Lithographing Co., Little Rock, Arkansas, to membership.

The organization has over 1,500 members, all of whom have risen to the presidency of a sizeable corporation before the age of forty.

Mellick Named to Board

Carlton Mellick, executive vice president of Miehle-Goss-Dexter, Inc., was recently named to the board of directors.

An alumnus of Northwestern University, Mr. Mellick joined the Miehle Co. (now a division of MGD) in 1929. He was vice president of that division and director of sales of several other divisions until August of this year, when he joined the corporate staff as an executive vice president.

H. L. Ruggles Dies

H. L. Ruggles, 88, retired head of the H. L. Ruggles Co., Chicago printing and lithographing firm, died Oct. 23 in Santa Monica, Calif., where he had resided since 1946.

Mr. Ruggles was one of 18 business men who in 1905 founded the first Rotary Club in Chicago, whence it has spread around the world. He was president of the infant organization from 1908 to 1910.

At Rotary's Golden Jubilee convention in Chicago, four years ago, he was honored as one of the surviving founding fathers.

Three Receive K-C Stock

Three persons engaged in the graphic arts industry each earned a share of Kimberly-Clark Corporation stock last month in exchange for cost and laborsaving ideas.

They are H. Wayne Warner, assistant production manager of Judd and Detweiler, Inc., Washington, D. C.; Ernest Jones, Jones Printing Company, Omaha, Nebraska; and Albert W. Ramus, mailroom foreman, the Citizen-News, Hollywood, California.

Kimberly-Clark is trading 18 shares of stock during a one-year period for ideas relating to the graphic arts and judged to be exceptional. Printers, lithographers and anyone in allied fields are eligible to submit as many cost and labor-saving tips as they wish during the "Let's Swap Ideas" program.

The three winners earned shares of Kimberly-Clark stock for ideas they submitted in the program during August and September.

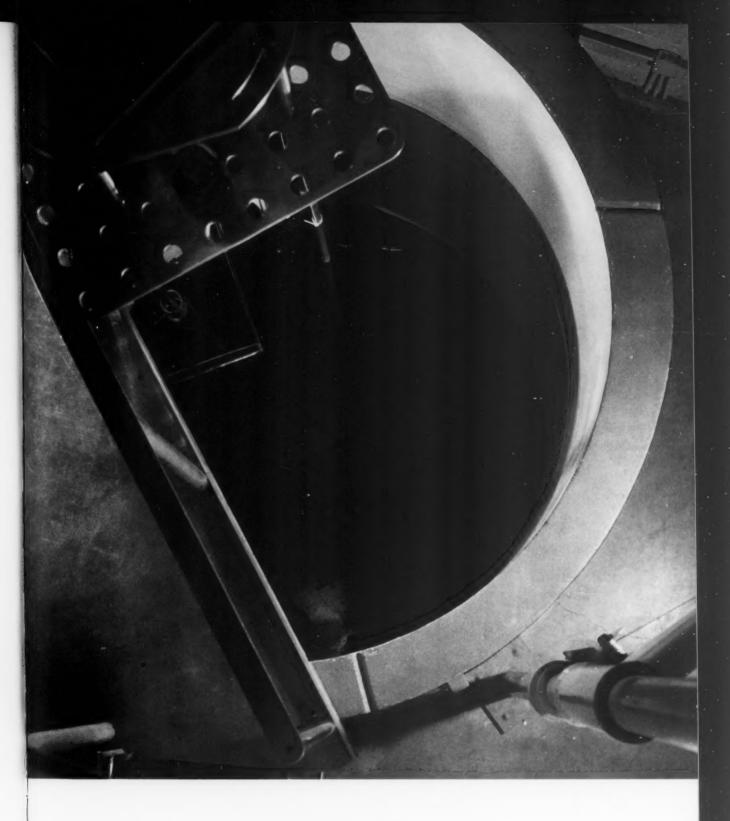


adds the spark of life!

Here's new "pop-off-the-page" realism for you! Williamsburg Offset makes a perfect foundation for printed illustrations that come *alive*. This new sheet performs equally well—offset or letterpress. See your local Union-Camp fine papers distributor for sizes, weights and samples.

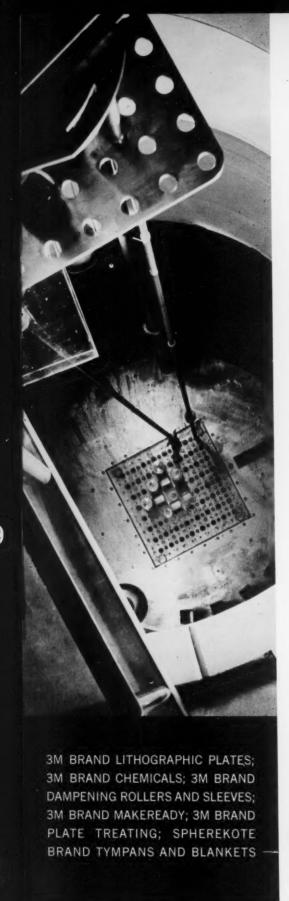








from 3M's Research Center...with tools such as controlled atomic radiation ... come new and exciting products to make tomorrow more promising for printers!



...where research is the key to tomorrow!

The 24-foot gamma radiation well shown on the preceding page exemplifies the scope of work in progress at 3M's Research Center. With advanced equipment such as this, 3M's scientists and engineers work tirelessly to create, develop, and produce new and exciting products and methods for the printing industry.

This is a process of analysis and exploration . . . to analyze industry need . . . to explore the fields of chemistry and physics. Often, hundreds of possible ideas are discarded for just one product or method that reaches the development stage . . . that comes up to the high standards of 3M quality, practicality, and performance.

3M's promise to you is that the products and methods it now markets—such as those below—have been rigorously tested in the laboratory, thoroughly tried in the field by printers, and quality proven. And, those products soon to come will fulfil the same requirements—to make tomorrow more promising for the printing industry.





NASHUA DAVA THE MODERN LABEL PAPER!



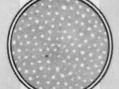
MR. RICHARD KAYE, PRESIDENT OF KAYES', INC., FARGO, N. DAK. SAYS: "YOU'LL TAKE ON ALL THE GUMMED PAPER JOBS YOU CAN GET-AND GO OUT FOR MORE-ONCE YOU TRY NASHUA DAVAC."

You've never printed gummed paper like this before! Nashua DAVAC looks, feels, performs like ungummed stock...ends press problems... puts profit back into gum label printing!

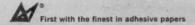
DAVAC's matte-like adhesive—developed by Nashua - lets the paper "breathe" ... expand and contract, absorb and release moisture without curling. This modern paper stays flat under relative humidity of 70% and more...

updates your label printing - from storage, to satisfied customers!

Prints beautifully, too. DAVAC is neither broken nor stack calendered...gives you reproduction quality conventional gummed papers can't touch. Thousands of printers like Mr. Kaye now use, and endorse, modern DAVAC. Ask your distributor about this original balanced gummed paper. He's listed on the back of this insert.



Microscopic beads of adhesive let DAVAC paper "breathe", thus prevent curl. Matte-like finish takes ink beautifully when labels must be printed on adhesive side.





This is the <u>adhesive</u> side of **DATAC** gummed paper!

Note the crisp, sharp printing. DAVAC'S matte-like adhesive is excellent for look-through labels, window stickers, other reverse-side jobs. DAVAC is available through the fine paper merchants listed below. Ask for trial-run sample sheets.

AKRON, OHIO
Alling and Cory Company
Millcraft Paper Company

ALBANY, NEW YORK Hudson Valley Paper Company

Carpenter Paper Company

ALEXANDRIA, LOUISIANA Louisiana Paper Company, Ltd.

ATLANTA, GEORGIA
Sloan Paper Company
Whitaker Paper Company

AUGUSTA, MAINE
Carter Rice Storrs & Bement

AUSTIN, TEXAS
Carpenter Paper Company

MALTIMORE, MARYLAND
Whitaker Paper Company
White Rose Paper Company

BATON ROUGE, LOUISIANA Louisiana Paper Company, Ltd.

BILLINGS, MONTANA Carpenter Paper Company

BIRMINGHAM, ALABAMA Sloan Paper Company

BOSTON, MASSACHUSETTS
Carter Rice Storrs & Bement
John Carter Company

BRISTOL, VIRGINIA
Dillard Paper Company

BUFFALO, NEW YORK Alling and Cory Company

CHARLESTON, WEST VIRGINIA Central Ohio Paper Company

CHARLOTTE, NORTH CAROLINA Charlotte Paper Company Dillard Paper Company

CHATTANOOGA, TENNESSEE Sloan Paper Company

CHICAGO, ILLINOIS

Bradner Smith and Company
Carpenter Paper Company
Dwight Bros. Paper Company

CINCINNATI, OHIO Chatfield Paper Corporation Whitaker Paper Company

CLEVELAND, OHIO Alling and Cory Company Millcraft Paper Company

COLUMBIA, SOUTH CAROLINA Dillard Paper Company Palmetto Paper Company COLUMBUS, OHIO Central Ohio Paper Company

CONCORD, NEW HAMPSHIRE
John Carter and Company, Inc.

DALLAS, TEXAS
Carpenter Paper Company

Central Ohio Paper Company

DENVER, COLORADO Carpenter Paper Company

DES MOINES, IOWA Carpenter Paper Company

DETROIT, MICHICAN
Seaman-Patrick Paper Company
Whitaker Paper Company

EAST HARTFORD, CONNECTICUT
Carter Rice Storrs & Bement

EL PASO, TEXAS Carpenter Paper Company

FARGO, NORTH DAKOTA
John Leslie Paper Company

FORT WAYNE, INDIANA Millcraft Paper Company Taylor Martin Papers, Inc.

FORT WORTH, TEXAS
Carpenter Paper Company

Rhodes Paper Company

Carpenter Paper Company

GRAND RAPIDS, MICHIGAN
Carpenter Paper Company

GREAT FALLS, MONTANA Carpenter Paper Company John Leslie Paper Company

GREENSBORO, NORTH CAROLINA Dillard Paper Company

GREENVILLE, SOUTH CAROLINA Dillard Paper Company

HARLINGEN, TEXAS
Carpenter Paper Company

HARRISBURG, PENNSYLVANIA

Alling and Cory Company
HARTFORD, CONNECTICUT

John Carter and Company
HONOLULU, HAWAII

Honolulu Paper Co. Ltd.

HOUSTON, TEXAS Carpenter Paper Company INDIANAPOLIS, INDIANA Indiana Paper Company

JACKSON, MISSISSIPPI Jackson Paper Company

JACKSONVILLE, FLORIDA
Jacksonville Paper Company

JAMESTOWN, NEW YORK Millcraft Paper Company

KANSAS CITY, MISSOURI Carpenter Paper Company

KNOXVILLE, TENNESSEE
Dillard Paper Company

Carpenter Paper Company

Roach Paper Company

LONGVIEW, TEXAS
Etex Paper Company

LOS ANGELES, CALIFORNIA Carpenter Paper Company Ingram Paper Company

Rowland Paper Company

LUBBOCK, TEXAS
Carpenter Paper Company

Caskie Paper Company, Inc.

Macon, GEORGIA Macon Paper Company

MEMPHIS, TENNESSEE
Tayloe Paper Company
Roach Paper Company

MERIDIAN, MISSISSIPPI Newell Paper Company

MIAMI, FLORIDA Everglade Paper Company

MILWAUKEE, WISCONSIN Dwight Bros. Company

MINNEAPOLIS, MINNESOTA Carpenter Paper Company John Leslie Paper Company

MISSOULA, MONTANA Carpenter Paper Company

MOBILE, ALABAMA Partin Paper Company

MONROE, LOUISIANA Louisiana Paper Company, Ltd.

MONTGOMERY, ALABAMA Weaver Paper Company NASHVILLE, TENNESSEE Bond-Sanders Paper Company

NEWARK, NEW JERSEY Central Paper Company

NEW HAVEN, CONNECTICUT
John Carter Company
Carter Rice Storrs & Bement

NEW ORLEANS, LOUISIANA
D and W Paper Company, Inc.

NEW YORK, NEW YORK
Alling and Cory Company
Miller & Wright Paper Company
Harry Elish Paper Company
Linde-Lathrop Paper Co., Inc.
Geo. W. Millar and Co., Inc.
Whitaker Paper Company

NORFOLK, VIRGINIA
Old Dominion Paper Company

OGDEN, UTAH Carpenter Paper Company

OKLAHOMA CITY, OKLAHOMA Carpenter Paper Company

OMAHA, NEBRASKA Carpenter Paper Company

ORLANDO, FLORIDA Central Paper Company

PHILADELPHIA, PENNSYLVANIA Rhodes Paper Company Whiting Patterson Company

PITTSBURGH, PENNSYLVANIA Alling and Cory Company Whitaker Paper Company

POCATELLO, IDAHO
Carpenter Paper Company

PORTLAND, OREGON
Carter Rice and Company

PROVIDENCE, RHODE ISLAND
Carter Rice Storrs & Bement
John Carter and Company, Inc.

PUEBLO, COLORADO Carpenter Paper Company

RALEIGH, NORTH CAROLINA Raleigh Paper Company

RICHMOND, VIRGINIA
Richmond Paper Company

ROANOKE, VIRGINIA Dillard Paper Company

ROCHESTER, NEW YORK
Alling and Cory Company

ST. LOUIS MISSOURI
Acme Paper Company
Beacon Paper Company

ST. PAUL, MINNESOTA
Carpenter Paper Company
John Leslie Paper Company

SALT LAKE CITY, UTAH Carpenter Paper Company

SAN ANTONIO, TEXAS Carpenter Paper Company

SAN FRANCISCO, CALIFORNIA Bonestell Paper Company Carpenter Paper Company

SAYANNAH, GEORGIA The Atlantic Paper Company

SEATTLE, WASHINGTON
Carpenter Paper Company
West Coast Paper Company

SHREVEPORT, LOUISIANA Louisiana Paper Company, Ltd.

SIOUX CITY, IOWA Carpenter Paper Company

SIOUX FALLS, SOUTH DAKOTA
John Leslie Paper Company

SPOKANE, WASHINGTON Independent Paper Company

SPRINGFIELD, MASSACHUSETTS
Carter Rice Storrs & Bement

SYRACUSE, NEW YORK
Alling and Cory Company

TACOMA, WASHINGTON
Allied Paper Company, Inc.
TALLAHASSEE, FLORIDA

Capital Paper Company
TAMPA, FLORIDA

Tampa Paper Company
TEXARKANA, TEXAS

Louisiana Paper Company, Ltd. TOLEDO, OHIO Central Ohio Paper Company

Millcraft Paper Company
TOPEKA, KANSAS

Carpenter Paper Company
TYLER, TEXAS

Etex Paper Company
UTICA, NEW YORK
Alling and Cory Company

WASHINGTON, D. C.
Whitaker Paper Company

WICHITA, KANSAS Southwest Paper Company

WILMINGTON, DELAWARE Whiting-Patterson Company

WILMINGTON, NORTH CAROLINA Dillard Paper Company

WORCESTER, MASSACHUSETTS
Carter Rice Storrs & Bement

There is only one DATERC order it by name!

Uarco Elects Baur

Uarco, Inc., Chicago-based manufacturers of business forms, has announced election of Adelbert C. Baur as vice president and chief sales executive. Mr. Baur became associated with the firm in 1939 as a salesman and last summer was named general sales manager.

American Photocopy to Expand

American Photocopy Equipment Co., has announced plans for a 40,000 sq. ft., expansion program at its Evanston, Ill., plant. An addition of 30,000 sq. ft. will be used for manufacturing purposes and a 10,000 sq. ft. addition will be made to the research building for laboratories, offices and drafting room. A 25,000 sq. ft. lot has also been acquired for employe parking. Cost will be in excess of \$1 million, according to Samuel A. Rautbord, president.

Chicago Litho Education

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Chicago area printing teachers toured the Chicago Lithographic Institute Nov. 18, on a "Career Opportunities in Lithography Night" jointly sponsored by the Chicago Lithographers Association and Local 4, Amalgamated Lithographers of America.

After viewing the school facilities in Local 4's building at 1611 W. Adams St., various industry speakers reviewed the record of lithography's rapid expansion, assayed the prospects for future growth, explained the need for trained craftsmen and the school's program for providing the personnel needed.

Moreland Elects Anglemoyer

William F. Anglemoyer has been elected a director and president of The Moreland Corp., Willow Grove, Pennsylvania, printing roller manufacturers. He succeeds William J. Hunt, who has been appointed chairman of the board.

Richard C. Wainwright was named secretary and a director of the corporation.

WNYPIA Chairmen Announced

President George L. Heffernan of the Printing Industries Association of Western New York announced chairmen of several committees for the coming year. Marvin Hansen of Pollack Printing Corp. will head the program committee. Joseph Cross, of Franklin-Cowan Paper Co. will head the publicity and public relations committee.

Gene Wink, of Wm. J. Keller, Inc. will head a committee to develop a junior achievement program.

Sales, Management Seminar

Printing Industry Association of Houston held its first Sales and Management Seminar, Nov. 23-25.

The seminar was conducted by Charles W. LaBlanc, director, Special Services Division, Research Institute of America.



Union Presidents at Open House Elmer Brown (L), president of the International Typographers Union and Kenneth Brown, president of the Amalgamated Lithographers of America posed for this picture at a recent open house held to celebrate the opening of the ALA's new offices at 233 West 49th St., New

Packaging Forum Features Printing Seminar

THE 21st Annual National Packaging Forum, Nov. 16-18, included a printing seminar held Nov. 17, at the Statler-Hilton, New York.

The session, entitled "Get Set With Offset" had as its primary objective, convincing packagers of the advances and advantages of offset as a packaging production medium.

The topics covered were "Spotlighting the Latest Developments in Lithography," Walter J. Ash, Consolidated Lithographing Co.; "The Phenomenal Growth of Lithography in the Last Twenty Years," Frederick T. Marston, the Kaumagraph Co.; "Lithography-Pacemaker of the Label Field," LeRoy L. Gamse, Gamse Lithographing Co.; "Why Offset Lithography for Folding Cartons," R. T. Maston Jr., Carton Division of Rochester Folding Box Co. and "Growth and Development of Offset Lithography in the Metal Container Industry," James L. Burns, American Can Co.

In keeping with the purpose of the seminar the speakers pointed to the tremendous growth in the use of lithography in packaging as opposed to its rather small beginnings.

Beginning with the discovery of the method by Alois Senefelder the various speakers progressed, according to their topics, to the size of the industry today and the vast improvements made, especially in the last twenty years.

While the reasons for this growth were many, Mr. Marston said that he

felt the primary advances could be listed as (1) a single revolution of the cylinder for each impression; (2) faster makeready and (3) the rubber blanket, which enables the impression to conform to both rough and smooth surfaces. None of these developments is new, but Mr. Marston felt that they are the prime movers in lithography's growth.

As for the economic advantages of lithography, Mr. Gamse cited the fact that, since 1939, labor and paper costs to the lithographer have increased 150 percent while the cost to the user of lithographic products has increased only 120 percent.

Mr. Maston pointed out that longer lasting plates have had a great influence on past growth. He referred to the fact that twenty years ago the average plate life was 30,000 impressions, whereas today it is not strange to run over one million impressions per plate.

Mr. Burns said that a number of recent developments could greatly increase the effectiveness of lithography in the metal decorating field. The biggest advance he felt is the coil method of feeding presses which could increase press speeds to as high as 800 impressions per minute.

He also pointed to the increase in speed already effected on the presses, from an original speed of 30 to 40 per minute on a hand fed press to a speed today of 150 to 175 per minute.

Plan Printing Week Display

Plans for the annual Printing Week observance in St. Louis include one of the largest exhibitions of printed matter and equipment ever assembled in St. Louis.

The exhibition hall of Stix, Baer & Fuller, downtown department store, has been reserved for the event. The St. Louis Club of Printing House Craftsmen, sponsoring the event, reports there will be at least 20 booths of machinery, including platemaking, silk screen, typesetting, presses and other mechanical phases of the industry. All booths will have active working personnel to explain and demonstrate the various phases of printing.

Open to the public, the printing week display will be presented as "St.

Louis Salutes the Printing Industry."
There will be additional displays set
up in the downtown public library.

The club is also planning a display of national advertising printed in St. Louis. In addition to press sheets in black and white and color, the display will include samples of printing on metal, cloth and plastic and cardboard.

Moves to New Quarters

NuArc Co., Inc., has moved into new quarters at 4110 West Grand Ave., Chicago 51.

The move will reportedly quadruple the present production and office facilities of the company. A large showroom exhibiting the entire nuArc line will be opened at the new offices.

LPNA Invites Awards Entries

EARLY in November the LPNA opened its appeal to lithographers, printing buyers and trade associations for entries in the 10th Anniversary Lithographic Awards Competition & Exhibit. The appeal was made through the association's four-color brochure, which was designed especially by art director Allan Seide.

Final deadline for the receipt of entries, which can be submitted in advance of that date, has been set for January 18. Both LPNA members and non-member plants are eligible to participate. Entry fee for LPNA members is \$5.00 and this year the fee for non-members is \$10.00.

In the past nine years, the Lithographic Awards Competition has received a total of 18,092 entries from lithographers and printing users throughout the nation. Of these, a total of 2,234 winning specimens were chosen for their outstanding lithographic quality, art, design and functional value.

Fifty-one classifications of eligible material will be judged by a group of experts from the lithographic and advertising fields who will select 306 winners. Judging will take place the week of January 25, 1960 at the New York Trade School, 312 East 67th St.

Certificates of awards of equal

merit will be presented to the winners on April 25, 1960 at the LPNA's 55th Annual Convention at Boca Raton Hotel and Club, Boca Raton, Florida.

Five classifications have been established for combination material, including point-of-purchase displays, books, greeting cards, decals and packaging material.

As in past years, the association is planning to produce a 90-page Anniversary Awards Catalog, reproducing all of the winning pieces and crediting those participating in their creation and production.

Cover of LPNA Awards Competition announcement



Crescent Plant Completed

Construction has been completed on a new plant for the Crescent Ink & Color Co. of Ga., at 1040 Grant Street, S. E., Atlanta 15, Georgia. The company started moving to the new location from its former plant at 244 Forsythe Street, S. W. early in November.

The new Atlanta plant will manufacture a full line of lithographic, letterpress, flexographic and rotogravure inks. New equipment is being added to increase production and service.

Elliott Donnelley Honored

In recognition of the long services of Elliott Donnelley, vice president of R. R. Donnelley & Sons Co., in behalf of underprivileged youths in congested Chicago slum areas, a recently rebuilt home for the South Side Boys Club has been dedicated as the Elliott Donnelley Youth Center.

New York Exhibit Announced

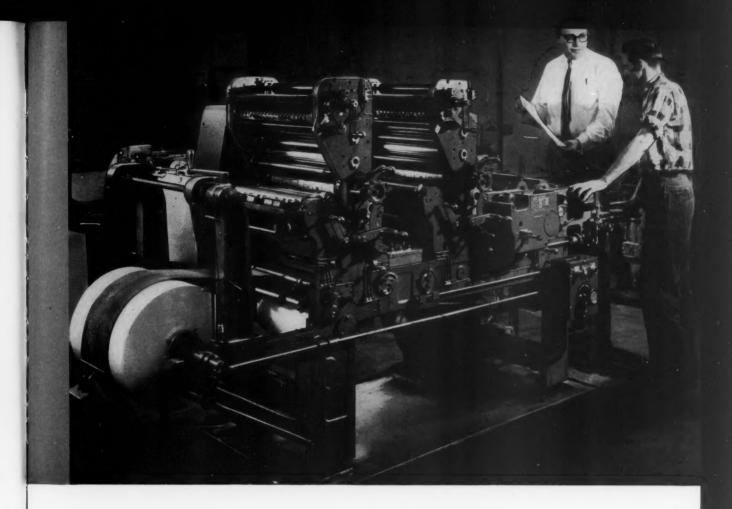
A large number of printed pieces have been entered in the 18th Exhibition of Printing sponsored by the New York Employing Printers Association.

The exhibition, to be a feature of Printing Week in New York 1960, will be held in the Hotel Commodore, New York, January 18-21. Last year's exhibition included almost a thousand specimens.

Entries, produced by any process or combination of processes, we re accepted in all principal classifications of printing uses: advertising printing, books, public and employee communications, instruction and professional manuals, periodicals, stationery, business forms, informational printing, point-of-purchase printing, label and package printing, novelty and specialty printing.

All entries have been produced since November 1, 1958 by printers or lithographers manufacturing in the New York metropolitan area.

A ten-member board of judges will examine each piece submitted and select for hanging the most outstanding specimens in each classification. Many pieces will be accompanied by case histories.



"I thought some of the claims for this ATF Green Hornet were fantastic!"

reports Leonard Stone, President, MULTICOLOR PRINTING AND OFFSET CORPORATION, Cleveland, Ohio

So he surveyed all printers who had purchased these web offset job presses...Mr. Stone prepared a 16-point questionnaire about the press and mailed it to every plant operating an ATF Green Hornet. 75% of the owners replied, giving their frank appraisals. The result? Mr. Stone installed his Green Hornet about a year ago.

Multicolor's offset equipment includes an ATF Chief 15 and also a 17 x 22" press, and Mr. Stone reports, "On most jobs, the Green Hornet beats the 17 x 22. Before the 22 can take over from the Chief 15, the

Green Hornet is ahead on price. Makeready is fantastically short, and the speed and over-all efficiency open doors previously closed to us.

"We are now very competitive in both quality and price on work formerly done on larger, slower sheetfed presses," says Mr. Stone, "and we can even print using only one color unit and still be competitive." Other advantages he cites are the ease with which an experienced sheet-fed pressman mastered press operation, and the savings in cost for stock purchased in rolls. "Paper in rolls is so much cheaper that the dif-

ference pays for the waste and still leaves a profit," he says.

Question: ARE YOU READY to compete for your share of the profitable printing this press can produce—at speeds up to 30,000 sheets per hour printed in two colors? If you'd like to explore the possibilities, your ATF Representative will provide facts and figures. ATF is the acknowledged leader in building web offset equipment—and, whether you require a two-color, three-color or four-color Green Hornet, or larger web presses, if you are ready to talk web offset...talk with ATF first.

ATF type faces used in this advertisement: Craw Clarendon, News Gothic Condensed with Franklin Gothic Condensed, Century Expanded.



AMERICAN TYPE FOUNDERS

200 Elmora Avenue, Elizabeth, New Jersey

LPNA Book Committee to Enlarge

THE recent meeting of the Book Manufacturers Committee of the LPNA discussed plans for broadening its membership. The committee approved plans to survey 37 LPNA member plants which manufacture books and book jackets to determine the general extent of interest in book production.

The committee is exploring the possibility of working together with the Book Manufacturers Institute at the latter's invitation. They are now in the process of revising their trade customs for letterpress book manufacturing and feel that the LPNA Committee's experience in this field would be helpful.

Nation-wide interest in the newly published customs continues, with LPNA receiving daily requests for copies. The committee agreed that any disputes arising out of the customs should be settled through the American Arbitration Association.

The committee is concerned with the "discriminatory" practice of paper mills in extending five percent discounts to publishers but not according the same privilege to book manufacturers. Key representatives of several paper mills will be contacted to explore the possibility of solving this problem.

A manufacturing study seeking economy in book production conducted by the American Association of University Presses was thoroughly examined. The Committee held there are many aspects of offset reproduction that call for more study and exploration by the AAUP, rejecting some of the assumptions about lithography incorporated in the report. It felt offset can offer some solutions to the problems encountered in university press book production.

The committee considered the trend of imports and exports of book products, noting that exports had increased 3.5% in 1958, rising to \$110,824,950, while imports had risen to \$34,048,499 for a 1.0% gain.

It was noted that dollar sales of general books in this country in-

creased by 6% in 1958. Volume sales of 200 publishing houses rose from \$316,517,000 in 1957 to \$335,524,000 in 1958—a 53% increase over 1952. The sale of textbooks in 1958 amounted to \$280 million, more than five times the pre-war figure of 1939 and 113% above the \$131 million volume reached in 1948.

The prospects for web-offset in book production seem remote at this time, according to a committee survey of press manufacturers. Some of the factors operating against the use of web-offset for book manufacturing are the variety of book sizes and lack of standardization, limitations posed by the fixed cut-off size of the press, the type of stock used and the fact that book quantities are too small. Web-offset, however, has been successfully employed in the large run areas of encyclopedias and school workbooks.

Photon Signs With ALA

Photon Typographers, Inc., Oakland, Cal., has signed a two-year contract with Amalgamated Lithographers of America Local 17. This followed expiration of the firm's contract with the Oakland Typographical Union and a vote by its five employes to relinquish membership in that organization. The five then applied for membership in the ALA local and were admitted.

According to Samuel M. Reed, president of the trade photocomposing firm, the new affiliation is expected to facilitate hiring of personnel skilled in the Photon keyboard operation and film handling, and trainees.

The firm expects to expand its equipment and services. In addition to the present three photon units, a tape unit and a camera are to be installed.

Installing 78-Ton Press

One of the world's largest presses, a 78-ton Miehle litho press of which there are only eight in existence, will soon be added to the Stecher-Traung Lithograph Corp. western division plant in San Francisco.

When installation of the giant press at 600 Battery St. is completed this month, it will be the largest offset press in use in the United States west of Chicago.

Seven others will be completed about the same time and installed in eastern lithographic plants. The new presses are said to be among the largest, if not the largest, ever manufactured.

They are sheet-fed units capable of printing from one to four colors in speeds up to 6,000 sheets per hour. The principal advantage lies in the sheet size the press will accommodate —54½ inches by 77 inches.

Manufactured in Chicago by The Miehle Co., a division of Miehle-Goss-Dexter, Inc., the press costs approximately \$400,000 installed, and stands more than 51 feet long, 16 feet wide and 8½ feet high. In addition to the increased sheet-size capacity, it incorporates numerous other advantages such as high-speed continuous feeding, and delivery of printed sheets in two piles rather than one.

Photo Contest Announced

The 1960 Scholastic-Ansco Photography Awards competition for junior and senior high school students has been announced by the sponsors, Scholastic Magazines and Ansco.

Ansco will award cash prizes of \$100, \$50, and \$25 in each classification and will double these awards when the prize-winning photograph is taken with Ansco film.

A rules booklet containing full information on the 1960 Scholastic-Ansco competition may be obtained from any Ansco dealer or by writing Scholastic-Ansco Photography Awards, 33 West 45th St., New York.

Ansco Advances Narrie

Walter J. Narrie has been appointed supervisor of special services for Ansco, Binghamton, N. Y.

In his new capacity, Mr. Narrie will be responsible for the preparation of technical aids for the photofinishing industry and the servicing of photofinishing and school photo laboratories.



POSED BY LOUIS NYE, APPEARING ON THE STEVE ALLEN SHOW, NBC-TV

Offset printing quality a piercing problem? If it's paper that's ambushing you, try fine quality, double coated Consolidated Enamels and your problems will bite the dust. You get truly outstanding, trouble-free printing results every time because every sheet is double coated on both sides to give a velvet smooth, uniform printing surface. They run better—print better—look better, yet Consolidated double coating doesn't cost you a penny more. Ask your Consolidated Merchant for free trial sheets. Make a test run and see for yourself.

 $Available \ only \ through \ your Consolidated \ Paper \ Merchant$

 $\begin{array}{ll} \textbf{DOUBLE COATED OFFSET-} Productolith, \ Consolith \ Gloss, \\ \textbf{Consolith Opaque} \end{array}$

FINE QUALITY LETTERPRESS — Production Gloss, Modern Gloss, Flash Gloss



enamel printing papers

A COMPLETE LINE FOR OFFSET AND LETTERPRESS PRINTING Consolidated Water Power & Paper Co. - National Sales Offices: 135 S. La Salle St. - Chicago World's largest specialist in enamel printing papers

Folding Box Display

The Folding Paper Box Association of America has announced three dates for display of winners in its annual competition to select the "100 Best" folding cartons of the past year. First showing will be made during the annual convention at the Ambassador Hotel, Los Angeles, on March 22 and 23, 1960. All entries will then be returned to Chicago headquarters of the organization. Here they will be on public display for the second time at the Drake Hotel, March 30 and 31. The third display is scheduled for the New York Coliseum on April 12, 13 and 14.

Wilson Jones Elects Linsky

Wilson Jones Co., Chicago-based manufacturers of loose-leaf business forms, office equipment and supplies, has elected John Linsky as chairman of the board and president. He succeeds Benjamin Kulp, who retired Oct. 31, after more than 40 years as head of the company.

Mr. Linsky is president of Swing-Line, Inc., of Long Island City, N. Y., which has been the largest stockholder in the Wilson Jones Co. Last winter he waged an unsuccessful proxy fight to gain control and this was finally accomplished when Kulp and his associates sold their stock holdings to him. Nine new directors were elected, replacing an equal number who resigned.

Stevenson Opens New Office

Stevenson Photo Color Co., Cincinnati, Ohio, has opened a sales office at 1621 Widener Building, Philadelphia, it was announced by Thomas



Completes Management Course
PIA president Walter McArdle (left) presents
certificate to Harold Gardner, William G. Johnson Co., Pittsburgh, Pa., for completing the
first National Training Institute in PIA's new
management service, "Managing Your Business," conducted by Peter Becker, Jr. The
course was held in Chicago, Oct. 19 and 20.

Stevenson, president. Clifford J. Murray, Sr., was appointed eastern sales representative, for New York City, Washington and Baltimore.

Maurice Rubin Advanced

Maurice Rubin has been named director of sales for both Service Printers, Inc., and Service Offset Corp., publication and commercial printers and lithographers, Chicago.

Mr. Rubin has been in the printing sales field for 15 years.

Named to Manufacturing Comm.

Chas. C. Haffner, Jr., chairman of the board of R. R. Donnelley & Sons Co., Chicago, has been named a member of the U. S. Chamber of Commerce manufacturing committee.

Purpose of this committee is to direct attention to means for preventing extension of government controls and regulations which retard economic growth and hamper operation of industry in a competitive market economy.

Litho Schools

- Canada—Ryerson Institute of Technology.
 School of Graphic Arts, 50 Gould St.,
 Toronto, Ont., Canada.
- Chicago—Chicago Lithographic Institute, 1611 W. Adams St., Chicago 12, III.
- Cincinnati-Ohio Mechanics Institute, Cincinnati, Ohio.
- Cleveland—Cleveland Lithographic Institute, Inc., 1120 Chester Ave., Cleveland 14, Ohio.
- Houston Univ. of Houston, Cullen Blvd.,
- Los Angeles—Los Angeles Trade Technical Junior College, 1646 S. Olive St., Los Angeles 15, Calif.
- Minneapolis—Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis 3, Minn.
 - Minneapolis Vocational High School, 1101 Third Ave. South, Minneapolis 4, Minn.
- Nashville—Southern Institute of Graphic Arts, 1514 South St., Nashville, Tenn.
- New York—New York Trade School. Lithographic Department, 312 East 67th St., New York, N. Y.
- Manhattan School of Printing, 72 Warren St., New York, N. Y.
- Oklahoma—Oklahoma State Tech., Graphic Arts Dept., Okmulgee, Okla.
- Rochester—Rochester Institute of Technology Dept. of Publishing & Printing, 65 Plymouth Ave., South Rochester 8, N. Y.
- Pasadena—City College, 1570 E. Colorado St., Pasadena, Cal.
- Philadelphia Murrell Dobbins Vocational School, 22nd and Lehigh, Philadelphia, Pa.
- Pittsburgh—Carnegie Institute of Technology School of Printing Management, Pittsburgh.
- San Francisco—City College of San Francisco.
 Ocean and Phelan Aves., Graphic Arts Department.
- St. Louis—David Ranken, Jr., School of Mechanical Trades, 4431 Finney St., St. Louis 8, Mo.
- Vancouver-Clark College.

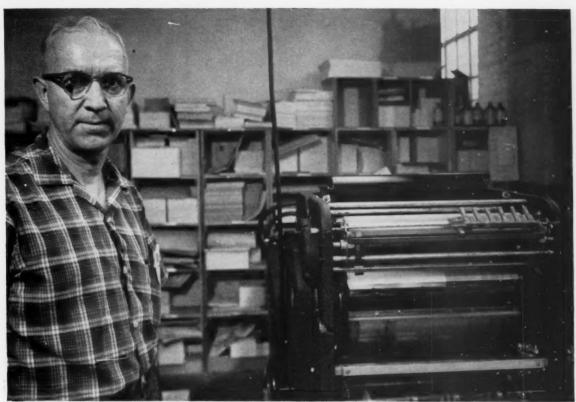
Trade Directory

Internati. Assn. Ptg House Craftsmen P. E. Oldt, Exec. Sec'y.
Room 307; 411 Oak St., Cincinnati 2. Lithographers and Printers National Association Oscar Whitehouse, Exec. Dir. 1025 Connecticut Ave., N.W., Wash., D. C. Lithographic Tech. Foundation William H. Webber, Exec. Dir. 131 East 39th St., New York 16, N. Y. National Assn. of Litho Clubs Frederick Shultz, Sect. Buckbee Mears Co., Toni Bldg., St. Paul 1, Mine National Assoc. of Photo-Lithographers Walter E. Soderstrom, Exec. V 317 West 45th St., New York 36, N. Y. National Metal Decorators Assoc., Inc. James G. Smith, Secretary P.O. Box 506, Crawfordsville, Ind. **Printing Industry of America** Bernard J. Taymans, Mgr. 5728 Connecticut Ave., N.W., Washington, D.C.

Three Complete Miehle Offset Training

Recent visitors to the Miehle plant in Chicago to study the operation of medium size multicolor offset presses which have been installed by their companies, flank technical training director Harry Lauchle (second from left). They are (l. to r.) William Davis, Allen Litho Co., Atlanta; Jerrome Switzer, foremian, and E. W. Pedersen, pressman, of Southern Publishing Assn., Nashville, Tenn. A Miehle 29", two-color was recently installed at Allen Litho and a 49", two-color was installed at Southern Publishing.





Mr. Edward Mitsch, Brown & Bigelow, St. Paul, Minn.

"We cut imprinting time more than 50% —with a Davidson Dual-Lith!"

That's how Mr. Edward Mitsch, factory foreman of the offset press room department, Brown & Bigelow, St. Paul, Minn., figures it. By using photocomposition and by printing with a Davidson Dual-Lith Model 233, enormous savings in time are realized!

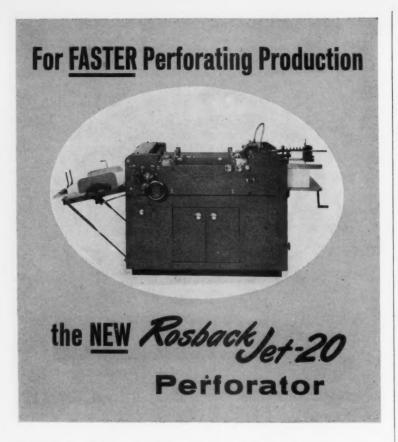
One Dual-Lith operator can handle the whole job, from making the plate to printing the order. He simply selects the required negative from his file of sentiments on offset negatives, adds to it the "personalization" negative included with the work order, strips them together, and makes a presensitized plate with a Nu-Arc printer. Presensitized paper plates are used for short runs; aluminum plates for runs over 1,000.

"While most of our work is one color (black), we do have occasion to run two and three-color imprints requiring exact register for close-fitting type spaces and decorative borders," says Mr. Mitsch. "Because the Dual-Lith has an excellent ink distribution system, we always are assured of highest quality, even solids. An operator can run this multi-color work as efficiently as single color.

"Necessarily, we must print on a wide variety of stocks. Yet we always get the same results: fast production, with close register, good ink coverage, proper ink-moisture balance, and foolproof feeding, with minimum set-up time required. Another thing we like: the automatic blanket throw-off which moves the blanket cylinder away from the plate cylinder if a sheet of paper should not feed. In fact, our experience with Dual-Lith has been so encouraging, we are carefully studying other aspects of our imprinting operations where we are now using letterpress."

For the whole success story of Davidson Dual-Lith at Brown & Bigelow, send the coupon today!

	ORPORATION enthaler Linotype Co. et, Brooklyn 5, N.	
	our free complete case gelow and descriptive	
Name		
Company		
Address		



For slot, strike, and snap-apart form perforating —for scoring, creasing and slitting

Designed for speed and built to traditional Rosback high quality, this NEW "JET-20" perforator fills the need for offset or letterpress sheet sizes printed on 14"x20" presses. New features include:

- Accurate performance at 12,000 to 24,000 sheets per hour on continuous perforating.
- Up to 7,000 sheets per hour on strike perforating.
- Minimum sheet size 6" x 6".
- Maximum sheet size 20" x 20".
- High speed perforating for carbon snap-apart forms.

- · Also scores, creases, and slits.
- A complete factory-built unit ready for operation when delivered.

An owner of a "JET-20" reports:

We are indeed happy with this machine. The top running speed is approximately 16,000 per hour—almost 4 times faster than the machine it replaced. In addition, an operator can convert from one job to another in less time, so has increased our perforating output approximately 70%. We find we cannot get along without the "JET-20,"

Every Rosback machine for bindery operation is designed to pay for itself through cost-saving, increased production. Get full facts from Rosback whenever you need paper perforating, punching, slitting, slotting, scoring, creasing or stitching equipment.

F. P. ROSBACK COMPANY · Benton Harbor, Mich.

MANUFACTURERS OF SLOT ROTARY PERFORATORS SINCE 1909

MGD Advances Walsh

F. I. Walsh, Jr., has been appointed vice president and general manager of The Dexter Co., division of Miehle-

F. I. Walsh, Jr.



Goss-Dexter, Inc., Chicago. He will make his headquarters at the Dexter plant in Pearl River, N. Y.

Mr. Walsh joined MGD in 1946 after World War II service as an officer in the U. S. Navy. As a member of The Miehle Company division, he served in various executive posts in the engineering, sales, service and technical adjustment departments. He was Miehle's national product service manager when he transferred to Pearl River.

Brevities

A NEW WEEKLY newspaper to be produced by offset has been established in Nevada City, Cal., by Alfred Heller. It is the Nevada County Citizen

SAM'L BINGHAM'S SON MFG. Co., Chicago manufacturers of printers' rollers, has named James Willis assistant sales manager.

T. K. Gray, Inc., Minneapolis, supplier to the graphic arts industry, has constructed a building at 1812 S. 6th St. and has moved to the new site.

GENERAL BINDING CORP., Chicago, has named Hugo C. Stowasser export sales manager. He will supervise sales activities in General Binding's 25 foreign offices in Europe, South America and Canada.

THE GRAPHIC ARTS INSTITUTE of New England, management association for the printing industry, has announced the appointment of Henry J. Mascarello of Lexington, Mass. as Executive Director, succeeding Col. Howard S. Patterson.

Robertson Speaks to GAA

Reuben B. Robertson, Jr., president of the Champion Paper & Fibre Co., Hamilton, O., spoke on "Graphic Arts in the 60's," at the annual dinner meeting of the Graphic Arts Association of Cincinnati on Dec. 1 in the Cincinnati Club.

New MGD Building

Miehle-Goss-Dexter, Chicago printing press manufacturers, started construction recently of a new office building at 5601 W. 31st St. The structure with 37,600 sq. ft. will provide space for an enlarged Goss company office staff and related departments.

Davis Elects Roehl

R. P. Roehl, former vice president, has been elected president and general manager of Miller-Davis Co., Minneapolis printers and stationers. He succeeds R. W. Davies, Sr., who was elevated to the new post of chairman of the board.

E. E. Swenson, formerly secretary, was elected vice president in charge of production and J. P. Jarosak was re-elected treasurer. R. W. Davies, Jr., was promoted to vice president in charge of the company's retail store, succeeding E. M. Hansen, who retired after 50 years.

Electronic Separator Announced

Vivicolor, a new electronic method of process color separation perfected for producing four color halftone separation negatives or positives in making plates for any size offset press, has been introduced by Vivicolor, Inc., Hollywood, Florida.

The inventor and developer, Daniel J. Maher, states that this is an entirely new process—one offered after three years of research and field testing—and the only one of its type available. Vivicolor enables any competent lithographer who can print black and white, to print four color process without additional equipment.

Maher attributes the method's low cost to the comparative speed with which the separations are made and the fact that no hand corrections are necessary. Separations from transparencies ranging in size from 35mm to 5 x 7 inches can be enlarged to as



Daniel J. Maher, inventor of Vivicolor

much as 11 x 17 inches on 150 line screen.

Vivicolor is located at 2038 Scott Street, Hollywood, Florida.

Incorporations

The following firms have recently been granted charters of incorpora-

Morris Litho Corp., 145 West 45th St., New York.

Advertising Lithography, Inc., 122 Duane St., New York.

Pan-American Lithographing Corp., 370 Lexington Ave., New York.

Republic Graphics, Inc., 185 Madison Ave., New York.

J. Miller Printing and Litho Corp., 175 Fifth Ave., New York.

Accurate Lithographs, Inc., 160 Broadway, New York.

Imperial Lithographers, Ltd., 112 East 19th St., New York.

Hamilton Lithographers, Inc., 1596 New York Ave., Hamilton Station, N. Y.

Rochester Lithograph Manufacturing Co., Inc., 208 Mill St., Rochester, N. Y.

Colortone Litho Service Corp., 250 West 57th St., New York.

Standard Lithographing Co., Inc., 140 West 31st. St., New York.

Bemark Press Corp., 295 Broadway, New York.

Jet Printing, Inc., 1501 Broadway, New York.



A clean running plate is the aim of every pressman. The fine grain on the Enco Aluminum Pre-sensitized Offset Plate helps to keep the non-printing areas clean by better control of ink and water balance. The result is a sharp impression ... no plugged halftones ... better quality in the reproduction.

Enco plates, both negative and positive working, are available in sizes for most presses in .0075" and .012" thicknesses, depending on size.

Write for technical data and prices.



MLA Hears Color Preparation Talk

HERBERT P. PASCHEL, graphic arts consultant and technical editor for ML, was the featured speaker at the November 9 meeting of the Metropolitan Lithographers Association, at the Hotel Roosevelt, New York.

As a prologue to his main theme, which was "Color to Date-Its Preparation and Handling," Mr. Paschel reviewed the status of color reproduction. Citing the opinions of a number of color scientists, he revealed that perfect reproduction in color is not within the realm of possibility. Masking methods are not foolproof and cannot produce equal results from all copy, under variable production conditions. The same applies to color scanners. Although some improvements in inks can be expected, it does not seem likely that perfect cyan and magenta inks will be produced. A certain amount of manual correction will be necessary even under the best of conditions.

Since the future does not promise any revolutionary changes, color printers cannot look forward to radically new methods and machines to solve their color problems. The situation is far from hopeless, however, he added. Color printers can make significant improvements in quality and reduce working time by simply standardizing and controlling their working procedures.

The best possible proof of the advantages of standardization, he stated, can be found in the success of the many short-run color systems. None of these involve any new methods or equipment. Instead, they are based on the application of long existing principles which have always been available to color printers. In the short run systems the photographic operations are standardized and controlled according to the characteristics of the standardized inks used. On the press the ink film can be controlled according to the standardized values. By eliminating variables, and controlling operating procedures, the short-run systems are turning out a high percentage of satisfactory reproductions at low cost. The application of these same techniques will work equally well for commercial color printers.

The advantages to be derived from improved masking methods, better inks, color scanners and other improvements, he concluded, will be minimized or dissipated in the absence of working standards, production controls and instrumentation. The benefits of present and future technology cannot be realized in color printing unless lithographers accept and apply the principles of standardization and control.

A new procedure for shorter run of three or four-color work based on Kodak's Newspaper R-O-P Color method, but applied to lithography, was covered by Manuel de Torres of Metropolitan Offset Plate Service from information supplied by William Falconer of the Eastman Kodak stores.

Basically, the process uses color separation prints on the new Resisto Rapid Pan paper which are made from Kodacolor or Ektacolor color negatives through the proper filters. The paper is designed to hold register and permit quick, simple retouching. The color negatives have built-in correction masks which help to give cleaner colors.

Additional color correction is obtained by exposing a correcting mask on Kodak Pan Masking film on the camera back. After processing, the mask is again placed on the cameraback over the paper and the separation made through the mask. A pin register system can be used to guarantee perfect fit from original to the finished job.

Screen negatives can be made from the corrected separation prints ready for exposing on presensitized plates. The procedure also allows further shortcuts; for example: if the originals are color transparencies of varying sizes, color negatives may be made to the proper size with matching color balance and density. From these a mechanical can be prepared with all of the elements of the layout positioned, and positives of the complete layout made at one time.

Mr. de Torres pointed out that in

common with the short-run color process, the highest quality and lowest cost are achieved only with standardization—pre-register throughout, densitrometric control for both the separation prints and the press colors and selected papers and process inks to insure maximum color fidelity. He also said that the reduction of preparation time and cost opens a tremendous new field in color for the relatively small user whose previous budget has been sufficient only for black and white reproduction.

Henry Latimer, executive director of MLA, showed how dye-transfer and Type C color prints are used to proportion, color balance and position any kind of color art elements to supply copy in one piece. This method, suitable for most commercial work, avoids the scaling of separate color elements and the color stripping required for assembling the layout. Copy involving inserts in the assembly is also handled by this method.

On hand was a two-color booklet cover from the Hoffman Beverage Co. which used the trick of combining and over-printing a blue-green with orange red. It was prepared with a Flexichrome from a B&W photo in these two colors with inks selected to match. Many tones of color and even blacks and grays were obtained, and what started out as a routine job ended up as a superior job from two colors—all resulting from constructive thinking and good planning.

A group of 100 MLA members and guests attended the meeting, a monthly activity of this employer group.

Junior Execs Visit Plants

The Junior Executives Club of Philadelphia made visits to two photo-engraving plants as part of their monthly meeting Nov. 19.

They first went to the American Photo-Engraving Co., 66 North Juniper Street and then to Phototype Engraving Co., 2121 Market Street. A dinner was served at the latter plant.

JOSEPH T. HANLON has been appointed manager of advertising and sales promotion of Crown Cork & Seal Co., Philadelphia.

Press Praises ALA Attitude

THE Amalgamated Lithographers I of America, which has received much favorable comment in the press in the past few years because of its enlightened attitude toward new equipment, industrial improvements, etc., came in for more praise recently from the New York Herald-Tribune and the New York Times.

Writing in his column "Wall Street USA" on Nov. 15, Donald I. Rogers, Herald-Tribune business and financial editor, had this to say:

". . . In most segments of labor. automation is staunchly resisted as it has been for years. One of the most far-sighted approaches on the part of labor to the nettlesome problem of automation was taken at the recent convention of the Amalgamated Lithographers of America. If it is granted that automation provides problems as well as great opportunities for industrial progress, then the attitude of the lithographers warrants careful consideration by all concerned.

"It has been estimated that without steady progress in manufacturing methods from early days it would now require 10 percent of the nation's work force just to make the light bulbs we now use. And they'd cost more than \$20 each. As new products are developed, ways must be found to produce the old with less labor.

"... The lithographers realize, too, that if lithography becomes too expensive, the work will be done by other processes. They aim to keep their industry competitive. That, of course, is exactly the same goal sought by the employers."

Efforts of the ALA to deal with the problems of automation at its Portland convention were praised Oct. 26 in an editorial in the New York Times.

"The ALA has long been committed to the theory-proved true in its industry," according to the editorial, "that technical improvements and more efficient organization mean more business in the long run, with greater income for the employes and expanding employment, in spite of the inevitable job dislocations."

Last year ALA set up a special committee to study new equipment and methods, to inform the union members of important changes to come and to work with locals "in dealing with the human problems of change."

ALA has been praised by many other publications for its progressive attitude, contrasting strongly with the "featherbedding and other make-work schemes rampant in some other big industries, such as the railroads and steel," and for its careful accounting and reporting of union welfare and other funds, and its use of the secret ballot in elections and referenda.

Victor Martocci Dies



Victor Martocci, 69, vice president and co-founder of Industrial Lithographic Co., Inc., Brooklyn, died Nov. 19.

Mr. Martocci had been with the firm since he and his brothers founded it in 1913.

What Typeface?

Headings in Paper

Big Italic Headings

New Printing Equipment

Erects Newspaper Building

Most Popular

Tempo Black Extended

Tempo Heavy Condensed Italia





Striking Display Lines

Ideal for all Marking Devices

Appeals to the Most Discriminating Buyer

New Library Funds

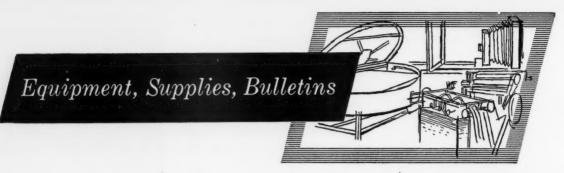
Graceful Color Lines
Admiral Script

Chis Design Has Quality

Domands Beautiful Script

Whether it's a bold, extended letter that delivers a punch . . . the graceful italics and scripts for the gentler touch...or the traditional and modern typefaces in beautiful yet conservative design...there is a Ludlow typeface that meets practically every requirement of the alert layout-man, printer or advertiser. Ask us for complete details.

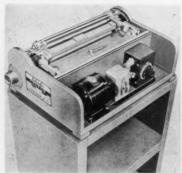
Ludlow Typograph Co. 2032 Clybourn Ave., Chicago 14



ATF Markets Adhesive Coater

THE 12" Schaefer adhesive wax coater for use in photocomposition and a variety of commercial printing and graphic arts purposes, is now available nationally through American Type Founders Co., Elizabeth, N. J., or any of its eleven branches.

The coater, the company points out,



Schaefer Coater from ATF

makes for faster and simpler paste-up composition with neater, more effective results than possible by rubber cement or other means. Any shape of sheet from ½" to 11¾" wide and to any length, can be uniformly coated by placing the sheet in the proof coater, which coats one side with hot adhesive wax. The wax-coated sheets can be used for paste-ups in photocomposition and similar operations. They can also be pasted temporarily to light-weight board and stored for future use.

The special adhesive waxes, reports ATF, are clear and when applied to acetate sheets do not throw shadows to affect the photography. The complete unit comes supplied with motor, electric heater and thermostat.

Descriptive sheet on the coater is available on request from ATF or any of its branches.

Type 3 on Stripping Film

Two film components, a high-contrast, photomechanical emulsion and a stripping base, have been combined into a new product by Eastman Kodak, Rochester, N. Y.

Called Kodalith Transparent Stripping Film, Type 3, the product combines the Type 3 emulsion with a stripping support thinness and durability. According to the company, the new film also possesses the unique quality of its predecessor enabling it to be stripped either wet or dry.

The Type 3 emulsion has been available previously on acetate and polystyrene bases as well as glass plates. The company states good results are obtained with exposure variations which may range from one-

half the normal exposure to two times the norm. The development range is equally wide with tolerance running from minus two to plus four minutes.

Further information may be obtained from Eastman Kodak Co., Graphic Reproduction Sales Division, Rochester 4, New York.

Bulletin On Dual-A-Matic

A new bulletin on the Davidson Dual-A-Matic describes the features of this automated small offset machine designed for short or medium length runs.

Many of the operations of the press are outlined along with descriptions of the other features of the equipment. The broadside includes a brief description of the company's two-cylinder principle that is reported to make possible eight operations; namely, offset printing, two-sided lithography, letter press, imprinting, numbering, perforating, dry offset, and Davengraving.

Copies are available from Davidson Corp., 29 Ryerson Street, Brooklyn, New York.

Hamilton Issues Bulletin

Hamilton Manufacturing Co., Two Rivers, Wis., has recently issued a booklet which describes its line of equipment for the lithographer. The booklet is fully illustrated.

Among the many items included are layout tables, retouch tables, dot etching tables, plate developing sinks, ink up tables, plate roller trucks, roller racks and vacuum printers.

One of the featured items is the vacuum printer for burning in plates up to $16\frac{1}{2}$ x 22'' which operates on a single cord supplying 110 volts. The size of the unit is $28\frac{1}{2}$ x 26''.

Copies of the booklet are available from the company.

Cover of Hamilton Litho Equipment Booklet



New Paper Cutter & Trimmer

A new precision cutter designed in both a floor and table model is being



"Kutrimmer" from Michael Lith Corp.

offered by Michael Lith Sales Corp., New York.

The newly designed hand clamp or foot treadle allows cutting of novelty stock like photos and photo negatives, carbon paper, foils, rubber, felt, thin plywood, leather, fabrics, and thin soft metal, according to the company.

The "Kutrimmer" possesses a new device never before found on paper trimmers: a measuring device for multiple cuts, and a hand clamp which can be swung aside in seconds when necessary for special cutting.

"Kutrimmer" is sold now in four sizes: 14%", 22", 28", and 32". The 28" and the new 32" size also come as treadle-operated floor models complete with stand.

Complete information and descriptive literature may be obtained from Michael Lith Sales Corp., 145 West 45th Street, New York 36.

New Bond Paper Sizes Available

Finch, Pruyn and Company, Inc., Glens Falls, N. Y. paper manufacturer, has just announced that 16 lb. and 20 lb. Duplicator and Mimeo Bond are now available in two larger sizes. The mill is now stocking both these papers in 17 x 22 and 22 x 34.

The new sizes have been added to enable dealers handling the Finch, Pruyn line to give more complete service. Both sizes are for printing $3\frac{1}{2} \times 11$ letterheads and forms fourup and eight-up.

Elect Label Papers

A new sample booklet of Eleet "Dot-Gummed" label papers is available from the Fine Paper Division of Ludlow Papers, Inc., Ware, Massachusetts.

Elect is a new line of gummed label papers which the company reports will not curl or block despite wide variations in temperature and humidity. A special glue process allows both surfaces to expand and contract independently so the paper remains flat both in storage and in printing.

Register Control System

A new control system, designed to align two or more variable sets of registration marks in high speed operation has been designed by Sterns Control Corp. Multi-color printing is one of the operations for which it was specifically designed.

This is a logic system able to make decisions within millionths of a second. It is designed not only to tell when two sets of marks are aligned and when they are not, but also which set is ahead and how much, which is behind and how much, and in which direction each set is off.

Information is available from the company in Great Neck, N. Y.

FASTER COLOR SEPARATION BYROBERTSON

IN LITHOGRAPHY

Shelby Lithographing Co.

DETROIT, MICHIGAN

"Since replacing our old cameras with Robertson's 41" Overhead and two Shooting Stars, we have tripled our capacity. Electronic controls enable us to do precision color correcting and masking formerly done by hand with doubtful accuracy, and we save valuable operator time in copy positioning and focusing."





"The extremely close tolerances of Robertson Cameras save us make-overs when we want to correct color separations after the job is done and the setting broken up. We can re-set the camera for the separation and be sure the registration will be exact.



If you are seeking lower cost, precision production in any neld of photomechanical reproduction, send for detailed descriptions of Robertson's complete range of modern precision cameras, Robertson's Plate Mates and essential accessories. It will be sent promptly.

A COMPLETE LINE OF PHOTOMECHANICAL EQUIPMENT ROBERTSON PHOTO-MECHANIX, INC.

7440 LAWRENCE AVENUE - CHICAGO 31, ILLINOIS



Introduce Three New Plates

Minnesota Mining and Mfg. Co., recently introduced three new types of litho plates.

The first, 3M type "S" plate, is designated for high quality and long runs on both black and white and color. It is a presensitized plate on which the non-printing areas are developed away, according to the company.

The second, type "L" plate, is dedesigned for runs up to 5,000. The company states that its cost is comparable to paper or plastic plates.

The third, type "R" plate, is designed for standard use on medium size runs and reportedly gives sharper halftones and better solids.

All the plates are aluminum.

Binding Units Offered

An all-electric punching unit and a foot-pedal operated binding unit has been introduced by Plastic Bindery Corp., Chicago.

According to the company, the unit offers a complete catalog, booklet, manual and sample portfolio binding manual, and sample portfolio binding department.

The units are the Model 27 Power Punching machine and the Model 27 Plastico Manual Binding Machine.

Full details on the machines are available from the company at 732 S. Sherman Street, Chicago 5.

Navigraphic '60 Planned

The Navigators, an association for the advancement of the Graphic Arts, has announced plans for Navigraphic '60, March 19, at the Hotel Biltmore, New York.

Navigraphic '60 is the third in a yearly series of forums designed to present reports on progress in the Graphic Arts.

At present only two of the speakers and their topics have been announced. Hyman Safran, Safran Printing Co., Detroit, will discuss the many aspects of web-offset. Edward Orans, Quality Photo Engraving, New York, will speak on the DuPont "Dycril" photopolymer plate for letterpress.

COLOR UNDER CONTROL

(Continued from Page 36)

nated. These numbers are to follow the job through to its completion. They are a constant reference from department to department as the job proceeds through your plant.

- 2. CAMERA CONTROL: Start with what you plan to finish with. Put onto your copy board a set of color spots of your process inks, solids and twocolor combinations. It is very important that your inks be balanced process colors; with calibrated densitometer readings thereon. If you start with predetermined ink values, you are paving the way for color correction by the use of photographic masks. Read the gray scale of separations on a transmission densitometer to determine balance of separation ranges. Read your color spots to determine the correction needed by use of photographic masks.
- 3. Dot Etching: Give your dot etcher (or color corrector) a real color yardstick with which to measure color and tone. He can control tone and color if he can measure it. So, he must put into use the set of dependable tools which are provided in his color chart. Each job, in which fine color reproduction is required will need the attention of the color etcher. But, his work can be reduced to a minimum of time if he needs only to put on the finishing touches.
- 4. PLATEMAKING CONTROL: Make plates from contact negatives or positives, and don't think for one minute that to make a contact to match the original camera positive is a simple matter. It isn't! The operations of contacting must be controlled. If they are not, any resemblance between the contact positive and the original camera positive will be purely coincidental. The tools with which to accomplish this task are three:
- 1. Light integrator for exposure control.
- 2. Time and temperature for developing control.
- 3. Use of the common denominator for dot size checking.

Much of the color cameraman's fine

work and much of the etcher's careful planning can be detoured right there if these three tools are not employed. In the actual platemaking, the use of the LTF sensitivity guide is a MUST.

5. PRESS CONTROL: You have controlled your job from copy, then camera, through the etching operation and on to the plate, so now let's prove it. Proving must be done under conditions that can be duplicated later on in the production run. So, great care must be taken in assuring that the right amount of ink gets on the sheet and that the packing of the offset blanket is right. No matter how good the press and pressman, if you haven't built into the plates all the fine quality that you expect from the final job, you're not going to get it now. But, if you have, the pressman can then follow through with his responsibility to your control plan. He must use the ink hues which you originally planned for this job. He must run them to a predetermined ink film strength, which he will verify by the use of a reflection densitometer, and his blanket packing must be accurate.

Now the cycle is complete and has been under control all the while. You are back where you started. Every step was linked to the original copy. That's what we mean when we repeat our slogan, "Color under Control by Litho-Krome." Those are the controls that help build our product, which we market under our trademark, Litho-Krome

A quality control plan should always have as its goal, quality lithography. If it is anything less, it could easily be named a cheap control plan and its end product cheap lithography.

In closing, let me quote the words of a former president of the U. S.. William McKinley, who said,

"I do not prize the word 'cheap." It is not a word of hope, nor is it a word of comfort or inspiration. It is the badge of poverty and the sign of distress. Cheap merchandise means cheap men and cheap men mean a cheap country."

May I paraphrase and say it back to you like this:

"I do greatly prize the word 'Quality.' It is a word of hope, of comfort, and of inspiration, It is

the badge of prosperity and the sign of progress. Quality merchandise means quality men, and quality men mean a quality country."

NAPL

(Continued from Page 33)

One of the big savings with the plates is in press downtime, which is largely eliminated because of the speed of preparation of these plates.

Each of the speakers looked for larger size plates and longer runs in the very near future. A projection plate (made directly from camera to plate) also was predicted for the future.

One of the speakers urged lithographers to "check the jobs you bid on unsuccessfully, to see which of them you could have done more reasonably with presensitized plates."

S. G. Hall, of Eastman Kodak, showed color slides of the company's new Estar polyester film base. He told how the product is made and coated and how it can be used to handle a variety of line and halftone jobs.

Harold P. Dahlgren, president of Dahlgren Lithographic Equipment Co., Inc., described his new dampening system, which was described in detail in the June issue of Modern Lithography, page 32.

Nicholas A. Minotti, lithographic sales manager for Chemco Photoproducts Co., Inc., told about his company's new "Marathon" 24 x 24" roll-film camera. The unit has an automatic roller applied contact screen, and can be used for making contact screen halftones with roll film speed. The Marathon holds two screens in any combination of the following: rectangular—up to 24" square; circular—up to 23½" diameter; and contact—automatic, up to 18 x 22".

The Kodak Ektalith method for reproducing a few copies of a printed sheet or for making an offset master for producing several thousand copies was discussed by John McMaster, manager of the Graphic Reproduction sales division of Eastman Kodak Co.

Mr. McMaster used colored slides to illustrate the convenience of using the new Ektalith method of copying. He said the unit would be on the market

this month, and should find many applications in offset shops, for handbills, engineering drawings and perhaps shopping guides, weekend advertising handouts, etc. It will successfully reproduce coarse screen halftones.

Soderstrom: Sound Selling

Walter E. Soderstrom called on his long experience in the lithographing industry in outlining his ideas for building a sound selling program. The NAPL executive vice president proposed that offset salesmen put together a "diary of layout ideas" which they can use as needed in preparing ideas for printing buyers.

He also recommended the preparation of a manual on lithography, containing a wide variety of practical information for the man who buys printing. Included should be information on the general nature of the process, making of silhouettes, vignettes, duotones, importance of having good sharp copy, etc.

He decried the fact that "too many litho salesmen have no real idea of

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12" x	18"	65.00	9.00
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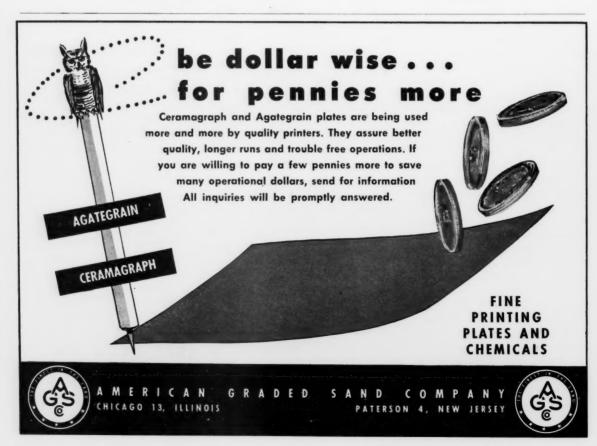
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what the process is all about and how it can best be used . . . they are merely order takers. They accept almost any kind of copy, and jobs for which their shop is not really suited."

A little more attention to planning and education—both for salesmen and buyers—will go a long way toward building a better sales picture, he stated.

Fay: Selecting Salesmen

A. J. Fay, of Western Printing and Lithographing Co., followed Mr. Soderstrom with a talk on the selection and training of lithographic salesmen.

He mentioned the use of aptitude and personality tests for determining the ability of prospective salesmen. "We need more scientific methods of hiring, and we need refresher courses for experienced salesmen every few years to be sure that they are keeping up to date with the industry developments."

He advised the use of "study groups" in the preparation of presentations for buyers, so that several men will have a chance to share their knowledge of the problems involved and hence enable a better presentation to be made.

He also pointed out the danger of a salesman making calls without prior approval from his plant. He told of the printing buyer who called the president of a lithographic company to tell him of his being called on by two different salesmen within a very short time, apparently without knowledge of each other's visit.

Mattson: Labor Relations

"The recently passed labor legislation probably will remain on the books relatively unchanged until 1971." That was the prediction of George A. Mattson, director of special services for Printing Industry of America, Inc. Mr. Mattson said that the history of labor legislation in this country (including the Wagner Act and the Taft-Hartley bill) indicates that the most recent legislation will remain unchanged for about 12 years.

"Both labor and management in our industry realize that reasonable profits are necessary to add to labor's security and help management make improvements that make labor's work easier," he declared.

In his opinion, profits are low in lithography because the year to year wage increases and hourly reductions are in excess of those granted in other industries.

Tyler: Preventive Maintenance

The productive life of a printing or lithographing press is based on proper maintenance, according to Roy P. Tyler, special services engineer for Harris-Intertype Corp.

Main points of any maintenance program are cleanliness, periodic lubrication and regular inspection. He decribed each phase in detail.

Grayson: Controlled Proving

In letterpress there is only one basic way of pulling a proof, but in offset there are many techniques and further variables from shop to shop. What is needed in lithography, believes Martin Grayson, of Printing Developments, Inc., subsidiary of Time, Inc., is the establishment of shop standards.

"We all have an eye for color, he observed, "but no memory for it." We must educate the customer to consider his printed job under the light by which it will eventually be viewed. It is pointless to view a proof under sunlight when the finished product, perhaps a point-of-sale item, will be viewed under the fluorescent light of a super market.

He announced that PDI has developed a light booth utilizing 3800 Kelvin, which he considers "the best compromise between sunlight, incandescent light and fluorescent light."

Talks on Accounting

A series of talks on cost accounting, compensation of salesmen, specifications and estimates, and accounting controls was presented on Thursday morning.

Frank R. Turner, Jr., NAPL's cost accountant, opened with a presentation of the new edition of the NAPL Blue Book, which can help any litho shop get a better idea of its actual costs for all operations in the plant, and thus guide pricing and estimating.

Mr. Turner said that he has done cost studies for more than 500 litho plants in recent years and in all his travels he finds only about one in 10 with a real knowledge of its costs.

An important new book



'The MAGIC of Making HALFTONES'

By K. W. Beattie

A handbook of ideas and techniques that will help the beginner make better half-tones in just a few days . . . an excellent refresher for the veteran. Written in a lively, how-to-do-it manner, in easy language, by a man who has nearly 40 years experience in the trade.

Order this useful book today at just \$4.25 a copy, shipped post paid any where in the world.

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YES send me a copy of 'Halftones' at the price of \$4.25.

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Otis E. Wells, of Western Lithograph Co., making his second address before the convention, outlined a variety of plans for compensating salesmen, depending on the size of the company, and the nature of its business.

Mr. Wells pointed out that a markup of 100 percent really only nets a 50 percent gain for the company. He quoted other figures to prove the point that as markup drops, the salesman's portion drops at a more rapid rate than management's. "This will help assure you that your salesmen will be looking for high markups," he commented.

Edward W. Armstrong, plant manager of McCormick-Armstrong Co., Inc., covered the subject of specifications, estimates and quotations. He mentioned the importance of planning the job all the way through the plant, ascertaining that it will really fit in with the plant equipment before making a quote.

Further details on accounting controls were offered by Oliver F. Ash, Jr., partner in Conner, Ash & Co., who backed up many of the comments of Mr. Turner.

It is important for any top executive to understand the two basic financial statements—the balance sheet and the profit and loss statement, Mr. Ash told the convention. He went on to say the most of the financial troubles of litho shops can be blamed on top management. He emphasized the importance of using accounting controls and accurate depreciation rates in financial planning to assure a profit.

Details of the all-day technical session on Saturday may be found elsewhere in this issue.*



3-COLOR

(Continued from Page 42)

you can be sure that grays in the original will reproduce gray.

We have found some simple techniques in making halftones which help to improve the quality of color reproductions. These techniques relate to tone reproduction. We have found that tone reproduction is as important as color correction in color printing. The most common fault is poor contrast in the highlights.

Highlight contrast can be helped by still development in making halftone positives. Of course, still development decreases overall contrast, but this can be overcome by using contrast increasing methods such as cc Magenta filters with the magenta contact screen. In making halftone negatives supplementary highlighting exposures may be used to increase highlight contrast. When using a contact screen, a 10 percent no-screen highlighting exposure is very beneficial.

Reflection Copy

Reflection copy originals offer some special problems, but in many ways they are easier to handle than transparencies. Of course gray scales should be carried with all the separations. As in the case of transparencies, the densities should be equal for all steps of the gray scale. Both the continuous-tone and halftones can be checked with a densitometer. Highlighting (still development or supplementary exposure) should be used here as well as for transparencies.

The one big advantage of reflection copy is that the tone reproduction of the process can be checked and corrected if necessary. If the gray scale can be carried through the printing operation, then it is possible to find out how good the tone reproduction of your standardized process really is. The densities of the original are plotted against the densities of the reproduction. A perfect reproduction would produce a straight line at 45 degrees to the axis. Any deviation from this is an indication that the separation process, or the method of making halftones, is not correct. In addition, by using the curve, you can determine what kind of changes in method are required to improve the results.

Values on the tone reproduction curve represented by densities of 0.4 or less are called highlights; 0.4 to



1.2 are called middletones; and densities above 1.2 are called shadows. If the line is steeper than the ideal line, then the reproduction is more contrasty than the original. If the line is flatter, then the reproduction is less contrasty. If your curve is above the ideal line, then the reproduction is darker than the original at that density. If a point falls below the ideal line, then the reproduction is lighter at that density.

Methods for controlling the shape of the tone reproduction curve are found in the Proceedings of the Fifth Annual Technical Meeting of the Technical Association of the Graphic Arts, April 27-29, 1953. "Factors Affecting Tone Reproduction with Contact Screens" by Franklin R. Clapper. Research Laboratories, Eastman Kodak. Another article published by the same organization is in the TAGA Proceedings 1954, May 10-12. "Tone and Color Control in Reproduction Processes" by W. L. Rhodes, Graphic Arts Research Department, Rochester Institute of Technology. (TAGA's address is P. O. Box 3064, Federal Station, Rochester 14, N. Y.)

The color control job can be summarized in this way:

- 1. Find out what is required in the way of materials and methods to achieve a desired result.
- 2. Establish a standard operating procedure, specifying the materials methods which produce a desired result.
- 3. Set up a method of checking the results at each step of the process. Use measurement whenever possible at this stage.

Of course nothing ever comes out exactly as planned. For this reason it is necessary to determine acceptable tolerance for each of the steps in the process — both for materials and methods. In general it is difficult to establish tolerances which are both tight enough to get a good result and loose enough to be practical from the production point of view. We have found that a tolerance of plus or minus 5 percent is both practical and close enough for most operations. Our pressman is allowed to vary 5 percent either way from the density

of the solids and the sharpness we specify. The halftones may be within 10 percent of each other in density and they may miss the specified value by 5 percent. If, however, they do not measure within the specified tolerances, we discard them and make a new set. We find that it is cheaper to throw them out than it is to try to compensate in platemaking or presswork.

Someday, I am confident, we will get to the stage in controlling a color process where we will be able to make separations, halftones and plates which will go onto the press without proving. I believe also that we will have such confidence in the outcome that we can sleep nights, sell color at an economic price, and make a profit at the same time. It even seems possible that if we are wise in our choices that sometime in the future we can make some Cadillacs at Ford prices.*

WASHINGTON COMM.

(Continued from Page 38)

- 2. Stripping and Platemaking Instructor: Joseph Hamm
- 3. Presswork
 Instructor: Arthur Nugent
- 4. Chemistry of Lithography
 Instructor: Albert Materazzi
- 5. Offset Photography Instructor: William Rankin
- Color Photography (First Year)
 Instructor: Oscar Rodbell
 Color Photography (Second Year)
 Instructor: Joseph McSweeney
- 7. Lithographic Estimating Instructor: Russell W. Clark

All courses are \$90 a year, including text and supplies.

In a few months, JLEC has instituted a program of apprentice and advanced lithographic training for the industry in Washington. It has seen the successful completion of its first 16-week course and now is conducting seven additional courses. The Council has operated in complete harmony with government, commercial, trade-union and non-trade-union personnel. Washington lithographers call the Council's work, as headed by Mr. Fowler, a credit to the trade and they feel the cooperation of the local industry is a credit to the community.*





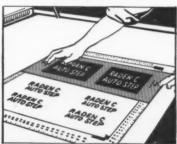
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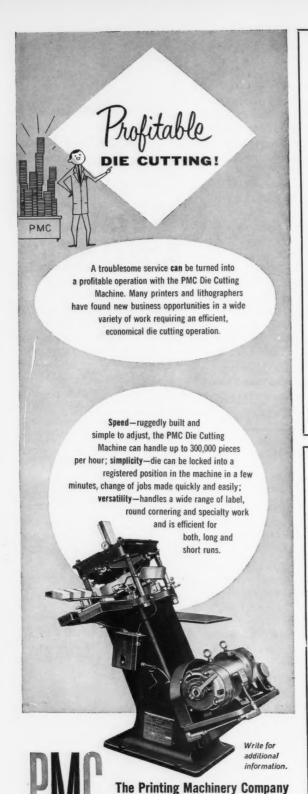


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- 12. INTAGLIO PRINTING INKS
- 13. NEW TYPE OF INKS
- 14. TESTING OF INKS
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Open Plate Shop

Stephen Rubenstein and Louis Ginsberg opened a trade plate shop, Nov. 30, at 13th and Callowhill Streets in Philadelphia.

The name is The Lithoplate Co.

PHOTO CLINIC

(Continued from Page 53)

The photographic technician with an inquisitive mind is not satisfied to know only what to do, he is also interested in "why". But if he is not careful in the selection of the book in which to find his answers he could very well be puzzled instead of enlightened, bored instead of fascinated. That certainly won't happen if he chooses How Photography Works as the source of his information.

The author, H. J. Walls, explains the scientific background of the photographic processes in an informative and entertaining manner. This by no means is meant to imply that he reduces everything down to the level of the rank novice. On the contrary, this book presents the latest theories and methods thoroughly but in a very readable way. And the many diagrams which illustrate almost every important point add considerable clarity to the text.

The 14 chapters carry the reader through the fields of optics, chemistry, physics, photochemistry (light sensitive materials, exposure, development, etc.), color fundamentals and color processes. The chapters and sections dealing with color vision, physics of color and light and related items are as authoritative and detailed as many an advanced text on the subject.

Reading this, or any other book, does not automatically improve the understanding and ability of the reader. But if being exposed to the right kind of information will help at all, then this book ought to be very helpful indeed.

THE PENROSE ANNUAL, Vol. 53, 1959. Hastings House, Publishers, 151 East 59th St., New York 22. \$12.

With its usual fine style and high standards, the 1959 edition of *The Penrose Annual* reviews another year of artistic and technical progress in the graphic arts. The text covers a wide variety of subjects and makes for stimulating and informative reading. Among the many excellent articles are several of interest to lithographic technicians. "Newsprint Applications of Web-Offset Color" by H. E. Phillips, describes and illustrates some of the work done in that field at Rochester Institute of Technology. In "A Case for the Standardization of Densitometers", K. E. Woods, PATRA, outlines the various types of densitometers, their differences, and how such instruments should be used. A means for minimizing moiré effects is the subject of a study by F. Pollak, Kodak Ltd. Sound recorded on the printed page by means of the Japanese "Synchrosheet" and "Synchroreader" is outlined in a comprehensive article. Books and periodicals on graphic arts subjects published during 1958 are listed and briefly described.

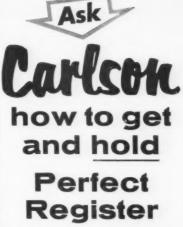
The illustrations, both those accompanying the articles, and those in the special section of outstanding examples of the reproduction processes, are not only fascinating but indicate the high quality of which the respective processes are capable. As a record of the past, and an inspiration for the future, Volume 53 matches its predecessors.

OFFSET COLOR FORMULATOR, Glenn-Killian Color Co., 4208 Main St., Philadelphia 27,

The "Offset Color Formulator" is not a book in itself but is instead a complete matching system. It is based on 10 standard inks—eight colors, a transparent white base and black. The "books", four in number, are color charts printed on both coated and offset stocks which permit the lithographer to make a quick selection of the color desired. Under each color is a formula for mixing the standard inks to reproduce the color selected. A wide range of colors can thus be produced from the 10 standard stock colors.

The present charts have a total of 574 distinct colors. This list, of course, can be extended by the user simply by keeping a sample of the color and the formula of any other mixture he may make.

The books may be purchased out-





This \$1.35 Carlson stainless steel register pin sent free with answer. Thin base. Will not buckle mask. Ample thumb space. Machined and polished to exactly .250".



This generous sample of Carlson Mask also sent free with answer. Each sheet of Carlson Mask is clearly identified with the Carlson mark of quality.



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Y ou can secure Budgeted Hourly Cost Rates for both Factory and All-Inclusive lithographic cost centers based on one and two shifts and for several rates of productivity in a treatise entitled "A Study of a Simplified Method for Building Budgeted Hourly Cost Rates in a Lithographic Plant", \$25 per copy, no charge to members. This up-to-date work shows in complete detail, every item going to make up these Budgeted Hourly Rates.

• The NAPL Forms Book is a tribute to the cooperation of NAPL members. Here you will find information that is commonly kept as a closely-guarded secret—internal forms pertaining to the myriad problems of litho management. All forms and systems have originated out of the experi-ence of capable and highly respected firms. When you are a member of NAPL, this material is available to you for your study and reference whenever you request.

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• Wages, Hours, Working Conditions and Complements of Help prevailing in union plants in

Bulletins throughout the year dealing with every phase of Production, Selling and Man-agement in a lithographic plant.

Trade Custom **Precedents**

Court Decisions on Lithographic Trade Customs dealing with the Ownership of Lithographic Negatives, Positives and Plates, Color Variations in a Lithographed Job, etc.

 Yes, and you can have many other "must" items dealing specifically with lithography. All of these values can be yours under NAPL membership.

Cost System • The Uniform Accounting and Cost System of the NAPL carrying complete forms and instruc-tions on how to gather and set up cost data and production time for all lithographic cost centers.

• We operate on the basis of delivering a maximum service program for minimum dues cost.

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Surveys of lithographers on Management Problems such as:

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right at \$40 a set, or obtained gratis with each trial order for the 10 standard inks. According to the manufacturer the "formulator" system not only simplifies ink mixing and color matching, but reduces ink inventory and eliminates waste.

PILKINGTON ON COLOUR PHOTOGRAPHY, W. J. Pilkington, Rayelle Publications, 76 West Chelten Ave., Philadelphia 44, 332 pp. \$10.

This book is a compilation of articles (Colourfacts 1-6) that have been published previously and separately during the years 1952 to 1956. Nevertheless, published in one volume they provide an interesting coverage of the subject.

In the first section the aesthetic aspects of color photography are discussed by the noted Danish photographer K. Helmer-Petersen. What follows is a technical treatment of the subject with, however, considerable attention to the aesthetics. This is the work of W. J. Pilkington, obviously a skilled practical worker with a deep love for the artistry of his craft.

The principles and techniques of color separation photography, pictorial photography in color and color portraiture are the themes of the second through fourth sections. The section following deals exclusively with color transparency systems, while the sixth and final section is devoted to color print processes. Masking principles and masking techniques are covered in considerable detail in two chapters in this section.

Although color technicians in general could profit by a careful study of this book, it will appeal most to those workers whose primary interest is in producing original color photographs from a wide variety of subject matter.

Briefly Noted

BEITRAGE ZUR BEDRUCKBARKEIT VON PAPIER UND FOLIEN, E. Rupp and K. Rieche, Institut für Grafische Technik, Leipzig.

This is a report on the printability of papers according to the methods and testing instruments developed at the Institute.

MOIRE-ERSCHEINUNGEN IN FARBENDRUCKEN, Bernhard Gasch, Institut für Grafische Technik, Leipzig. A serious and comprehensive study of the formation of moiré patterns in color printing.

ENTWICKLUNG EINES AUSWERTEGERATES FUR DIE FARBMESSUNG, J. Orthmann and K.-H. Schirmer, Deutsche Gesselschaft für Forschung im Graphischen Gewerbe (FOGRA), München.

Outlines the development of a system and instrument for measuring the color of printing inks.

TECH. BRIEFS

(Continued from page 51)

42, 3 pages. Portions of an address before the meeting of the Association of Publication Production Managers. Author gives a brief history of his company's growth in the web-offset production field. Costs of makeready and run are contrasted for the very long run magazines like Life and for the shorter runs of over 100,000. The big difference lies in the lower costs of makeready in offset, but other advantages are given as well. These are more specifically discussed in connection with Automotive News, which is set by letterpress methods in the publisher's plant, then run web offset. Paper, quality of result, and heat set inks are also discussed.

Graphic Arts-General

*The Printing Industry In The Soviet Union. A. J. Buckle. British Printer, Vol. 71, No. 10, Oct. 1958, pp. 75-9, 5 pages. Recorded impressions from a visit. Some of these are: Limitless demand for books. No competitive advertising, 70 per cent of employees are women. Sheet-fed rotary is rapidly replacing flat-bed. Pravda is printed on Hoe-Crabtree presses. They will adopt new developments, but are willing to let the developing be done abroad. There is no likelihood that Russia will enter the world market for printed goods as they will be busy for some time meeting their own requirements.

AUTOMATIC PRINTED CHARACTER READING. Scott, Bowman, and Curry, Peter A. M. Journal of the SMPTE, Vol. 68, No. 4, April 1959, pp. 240-1, 2 pages. There is a need for automatic character recognition in business data processing systems and a particular method of reading has been chosen. A description of the method also points out the facilities for overcoming the defects of ordinary typescript.

ISOLATING VIBRATION FROM MACHINERY. Anon. Share Your Knowledge Review, Vol. 40, No. 7, April 1959, pp. 9-11, 3 pages. Sources of several types of vibration absorbing supports are listed, and the use of such equipment is described by means of several actual examples.

AN EVALUATION OF THE FIVE MAJOR PROCESSES EMPLOYED IN PRINTING FOLDING CARTONS. Richard J. Walters. American Pressman, Vol. 69, No. 6, June 1959, pp. 34-6, 3 pages. Second of a series on the processes, this one discussing offset. Re-

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THE TALKING BOOK. Yasushi Hashino. Penrose Annual, Vol. 53, 1959, pp. 53-9, 4 pp. plus 4 pp. of illustrations. Report on a development carried out under the author's direction at the Tokyo Institute of Technology. Sheets, which may be bound into books, have printed on them a coating of an ink carrying ferro-magnetic iron oxide. Printing may be by gravure or offset. This sheet is then laid over a Synchroreader which by means of rotating magnetic head which travels down the length of the sheet records the desired sound, speech or music are mentioned. This may be played back by the same means. The magnetic ink is brown and may be overprinted in black, or black which may be overprinted in white. An 81/2 x 11 in, sheet gives either five or ten minutes of sound depending on speed used. A system of incorporating the magnetic material in the paper is being developed. Synchrosheets or Synchrobooks are names used.

Photoelectrets—A New Process. O. M. Forbet. Graphic Arts Monthly, Vol. 30, No. 11, November 1958, pages 114, 116, 2 pages. A new method of making photographs as described in two Russian scientific journals is reviewed. Work done by V. M. Fridkin employs the photoelectret principle discovered by Nadzhahor in Bulgaria over twenty years ago. Differs in basic principle from xerography although the processing and results are similar. The presently used materials give less light sensitivity than that of available xerographic papers and plates.

KARL FRANK PRINTING TESTER. Vivian Bird. Modern Lithography, Vol. 27, No. 3, March 1959, pp. 56, 123-5, 3 pages. A laboratory test machine developed by the German Society for Research in Printing, Munich. With it important properties of paper and ink can be tested away from the press before a run. Suitable for paper mills and ink factories as well as printers, for testing letterpress or offset, and for testing foils, rubber blocks and rubber blankets. Method of operation is described.

New Offset Techniques Govern Selection of Blankets. James R. Cooper. Inland and American Printer and Lithographer, Vol. 143, No. 3, June 1959, pp. 82-3, 96, 3 pages. Offset pressman can no longer select proper blankets by their color alone. Rapid advances in plates, dampening systems and inks have caused many changes in

blankets and pose new problems in blanket selection. Eight suggestions are given on the selection of blankets for specific services.

NEWSPRINT APPLICATIONS OF WEB-OFFSET COLOR. Herbert E. Phillips. Penrose Annual, Vol. 53, 1959, pp. 77-9, 3 pages plus inserts. Various types of color copy as printed on standard newsprint with a web-offset press are illustrated in the insert. Each is explained. These are: 1. Direct screened three-color separation, using the Rochester Institute of Technology three-color system of separation. 2. Electronically scanned color, by the Acme system. 3. Conversion from letterpress, using black reproduction proofs from each color plate. (In this example various screens are illustrated, from 30 to 266 lines per inch.) 4. Pre-separated art work, 5. References.

PROGRESS IN XEROGRAPHY. A Matheson. Litho-Printer, Vol. 2, No. 5, May 1959, pp. 37-8, 41-3, 5 pages. The basic process is explained, and it is pointed out that the greatest use of the process today is in the preparation of paper litho masters. These are good for up to 10,000 copies. Metal masters can also be prepared. The process is mostly used for line. Tone gives some trouble, one user prefers to strip in halftone. The equipment is described and costs discussed. Other newer and even speculative applications discussed are: resists for the preparation of letterpress plates, RCA Electrofax and Bruning Copytron, color sensitivity and color reproduction, the Copyflo machine for the continuous production of copies, and the possibilities of Xeroprinting.

THE CONTRAST OF MOIRE' PATTERNS. F. Pollak, Penrose Annual, Vol. 53, 1959, pp. 105-9, 5 pages plus insert. An analytical study of the contrasts of two- and threecolor chess-board moire' patterns based on what would be seen through various of the tri-color filters. This points out the causes of these patterns as they are visible to the eye. Illustrations are used to demonstrate the affect of different inks of one nominal color on moire' patterns. Unwanted color is pointed out as the cause of these patterns. This leads to the conclusion that moire' patterns can be minimized by selecting inks with the lowest possible unwanted color densities. It is pointed out that certain types of patterns encountered in wet printing do not fit this line of reasoning. Four references.

THE SEARCH FOR A COLOR STANDARD. Anon. British Ink Maker, Vol. 1, No. 2, Feb. 1959, p. 43, 1 page. The British Standards Institution is making a third attempt to establish a set of ink-color standards. Previous attempts in 1929 and 1949 apparently failed. The change in the situation since those attempts is pointed out, including European efforts and the importance of gloss. The new colors are so arranged with regard to transparency that they may be printed in any order. When the three colors are superimposed, a first class black results. At present this attempt is in the tentative stage. The author of this article seems to feel that the arrival at a standard is inevitable.★





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Walter Hansel Retires

Walter A. Hansel, vice president of General Aniline & Film Corp. and general manager of its Ozalid Division, announced his resignation in November.

Benjamin Friedland, presently assistant general manager of the Ozalid Division, has been appointed acting general manager.

Mr. Hansel joined the company in 1946 and was elected a vice president and general manager of the Ozalid Division in 1955.

Riegel Strike Settled

Riegel Paper Co., New York, announced a settlement, Nov. 24, of the strike which has affected its four New Jersey plants since Oct. 8.

The settlement, reached with Local No. 712, United Papermakers and Paperworkers of America, AFL-CIO, provides for a two-year contract with industry pattern wage increases of $3\frac{1}{2}$ percent, with a 7 cent per hour minimum the first year and 4 percent with an 8 cent minimum the second year.

Key problems in touching off the strike, revolving primarily around contract terms on such points as seniority, overtime, meals and hours of work have been settled in the agreement.

Russell R. Fagin, a retired office manager of the McCandlish Lithograph Corp., Philadelphia, died November 25 in Our Lady of Lourdes Hospital, Camden, N. J.

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TALE ENDS

Notes from NAPL

A LTHOUGH the attendance at the NAPL sessions and exhibit was quite satisfactory in terms of numbers (more than 2,000 were registered for one or more days) there was some disappointment on the part of exhibitors concerning the traffic in their booths.

For one thing, it was evident that many lithographers contemplating purchase of new equipment had already signed on the dotted line at the Graphic Arts Exposition last September in New York.

Secondly, it was felt that many of those at the Municipal Auditorium were sales and production personnel, who had come to learn, not to buy.

Obviously no trade show can satisfy everybody year after year. NAPL had great success in Boston last year and in St. Louis the year before. Next year, at the Conrad Hilton in Chicago, should be another winner.

While some exhibitors were a bit disappointed in the actual sales volume at the show, there was nothing but praise for the exhibit hall itself and the services of the hotel, except, of course, for the inevitable problems that arise when a hotel is oversold.

Actually there were many more persons at the exhibits than it might have seemed, and there are always those who attend, but dodge the registration desk. The crowd of interested lithographers touring the spacious, well-lighted aisles at times may have looked rather small. But the same group, in some of the crowded mezzanine show areas of former years, would have looked very sizable.

All officers of the association were reelected for another year. They were highly praised for the fine job they have been doing to keep up with NAPL's rapidly expanding membership. New members, joining at the convention, by the way, swelled NAPL membership to a record of 1,178.

One obvious way to provide more booth traffic for exhibitors would be to cut the meeting sessions somewhat. The program of talks was excellent but some of the afternoon sessions ran a little overtime.

A feeling of deep regret over the death of Harvey Glover, one of the old standbys at NAPL conventions, put a damper on the final day of the meeting. (Mr. Glover's passing is reported elsewhere in this issue.)

Missing from the convention was Merle Schaff, another NAPL oldtimer, and with good reason. He was back in Philadelphia presiding at the birth of another child. At press time we had no details of sex, weight and such matters.

Considerable interest was shown at the 3-M exhibit, where that company showed its new line of presensitized plates, called "S," "L" and "R," designed, respectively, for long-run color work, short runs up to 5,000 and medium range jobs.

Screen Process Printing Association, Int'l, Chicago, has released a booklet entitled "How To Prepare Art For Silk Screen Printing," as a helpful guide for persons responsible for preparing art and layouts. More than three years of effort went into preparation of the brochure, whose 16 pages contain several illustrations helping to explain the text while designs on front and back covers serve as examples of colorful and effective use of the screen process. The booklet is the latest in a series of publications.

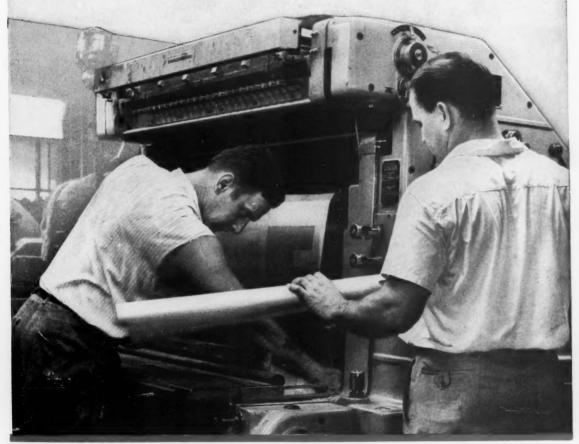


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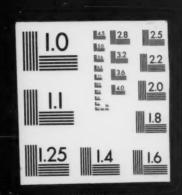
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